

# The Mining Journal

## RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 844.—VOL. XXI.]

London, Saturday, October 25, 1851.

[PRICE 6D.

**Statutes of Cornwall.**—In the Vice-Chancellor's Court.

TILLY v. MACINTOSH—SAME v. TRUSCOTT—SAME v. DICKINSON—  
SAME v. SMALL—SAME v. TREVILLION.

RE WEST UNITED HILLS MINE.

**NOTICE IS HEREBY GIVEN**, that, pursuant to the several Orders or Decrees made in the several above-named causes, and bearing date respectively the 19th day of August last, a PUBLIC AUCTION will be HELD at the Red Lion Hotel, TRURO, on Thursday, the 30th day of October inst., at Four o'clock in the afternoon, for such lots as shall be then and there determined on—

FIFTY (110th) PARTS, or SHARES, of the defendant, George Mackintosh, TWENTY-FIVE (110th) PARTS, or SHARES, of the defendant, Nicholas Truscott, TWENTY-FIVE (110th) PARTS, or SHARES, of the defendant, William Dickinson, FIFTY (710th) PARTS, or SHARES, of the defendant, William Small.

TEN (110th) PARTS, or SHARES, of the defendant, John Trevillion, of and in the SAID MINE; and the LIKE PARTS, or SHARES, of the said defendants respectively or in the ORES, HALVANS, MACHINERY, and MATERIALS, and OTHER EFFECTS, upon and belonging to the SAID MINE.

For further information application may be made to Messrs. Hodge and Hockin, solicitors, Truro.—Dated Registrar's Office, Truro, October 16, 1851.

**MINING PROPERTY**, situated in the parish of LLANIDLOES, in the county of MONTGOMERY, NORTH WALES.

**TO BE SOLD, BY AUCTION**, on Tuesday, the 4th of Nov., the MACHINERY, MATERIALS, FURNITURE, and EFFECTS of the MONTGOMERY LEAD AND COPPER MINE, (formerly Nantmelyn), comprising

1 46-ft. wheel  
2 balance bobs  
1 main ditto  
220 fms. flat iron rods  
1 39-ft. wheel and crushing mill  
10 fms. 9-in. ditto  
1 working barrel  
1 capstan and shears  
and a large quantity of materials, smiths' tools, &c. &c.  
Application to view the mine, &c., to be made to Capt. Michael Barber, Plymlimmon, Rhayader, South Wales.

For further information and particulars, communications to be addressed to Mr. J. N. Edwards, the Secretary, at the offices, 9, St. Michael's-alley, Cornhill, London. October 17, 1851.

TO ENGINEERS, FOUNDERS, STEAM-SHIP BUILDERS, AND OTHERS.  
**TO BE SOLD, BY PRIVATE CONTRACT**, on very advantageous terms to a purchaser, the proprietor retiring from the business, the NORTHFLEET IRON-WORKS,

situate on the banks of the Thames, about 20 miles from London-bridge, and within a few minutes walk of the Northfleet Station of the North Kent Railway, by means of which the City may be reached in one hour, constantly throughout the day.

The BUILDINGS have been most substantially erected, principally within the last three years, and are planned with much judgment.

A PIER has been also BUILT, extending into the River, and a WHARF constructed, FORMING A DOCK, in which vessels of considerable tonnage may lie, affording facility for fitting or repairing marine engines or boilers, or for loading or unloading goods, for which purpose a PAIR OF SHEAR LEGS has been erected, capable of lifting 25 tons; also a 10-ton WHARF CRANE.

The buildings comprise a TURNERY, fitted with self-acting screw-cutting, turning, boring and surfacing lathes, drilling machines, shaping and screw-cutting machines, planing machines, and steam arm, punching and shearing machine, principally by Whitworth, Collier and Smith, Besseck and Tannett; high-pressure STEAM-ENGINE, and an adjoining building two steam-boilers.

A lofty ERECTING SHOP, with a 20-ton overhead travelling CRANE, boilermakers and smiths' shops, with forges, furnaces, set of bending rolls and plates, cranes, and all requisite tools.

A commodious FOUNDRY, with four cupolas, patent fan, high-pressure STEAM-ENGINE and BOILER, a powerful crane, drying stove, and all usual appendages, patternmakers' shop, coppersmiths' shop, draughtsmen's office, counting-house, coach-house, stable, loam sled, iron stores, and store-rooms.

A spacious BARN, with triangles and crab, with gateway entrance. The whole establishment occupying a site of about one acre.

The premises are held for a long term, at a nominal ground-rent.

The machinery and tools are nearly new, and by the best makers. The supply of water is unlimited; coal can be procured at 9s. per ton, and the general arrangements and substantial character of the buildings combine to render this establishment most desirable to any person who may wish to commence business as an engineer, or to join the branch of marine engine manufacture to a business already established.

Further particulars may be obtained on application to Messrs. Fuller & Horsey, No. 13, Bitter-street, London.

GLAMORGANSHIRE—SALE POSTPONED.

**THE SALE OF FREEHOLD ESTATES AND MINERALS**, comprising the Farms of Maesmelyn, Pant-y-Shan, Pentwin, a Mote of Noyadd Wen and Tyr Elin, with the Cottages and Woodland thereon respectively, and the Mines and Minerals under a part of the Glauberan Estate, advertised to take place at the Castle Hotel, Neath, on the 29th October inst., is POSTPONED until further notice.

May be privately treated for in the mean time, on application to Mr. T. Thomas, auctioneer, &c., West of England Insurance Office, Neath.—Neath, Oct. 20, 1851.

TO MINE PROPRIETORS.—TO BE SOLD, at TOMAN-

T, TOUL, BANFFSHIRE, a very superior CRUSHING MILL; the water-wheel is entirely of cast-iron, 24-feet diameter, 4-feet breast, and overshot. The spur wheel is 7 feet diameter, and with the axles, pinions, &c., very strong, and capable of driving any additional machinery the water-wheel can propel. The crushing cylinders are 24 feet long, the upper pair 2 feet diameter, and the lower 20 inches. The framing is strong, and of the best rock elm. Compound levers are attached to each pair of cylinders, affording any power that may be required at will. The machinery is of the best quality as to materials, strength, and workmanship; and, being under cover, is as good as when put up, having never required any repairs. The machinery may be shipped at Kingston, Garmouth, or Port Gordon, on the Moray Firth, to which there are good roads.

Applications for purchase may be made to James Burgess, mining engineer, 49, Chancery-lane, Newcastle-on-Tyne.

HENDREFORGAN COLLIERY, GLAMORGANSHIRE.

TO BE LET, for a term of years, all the valuable and well-known SEAMS of ANTHRACITE COAL, IRONSTONE, and BLACKBAND, under the HENDREFORGAN FARM, in the parish of LLANGUICHE, in the county of GLAMORGAN, which comprises ONE HUNDRED ACRES OF LAND, and is situate within two miles of the Swansea Canal, to which there is communication by railroad, and within twelve miles of Neath.

The property contains the Little Vein, 3 feet thick, celebrated for the manufacturing of anthracite iron; the Big Vein, 5 feet thick; the Welford Vein, 3 feet thick; and the Three Coal Vein, 3 feet thick, of which have been proved; and also all the SEAMS of BANDS OF IRONSTONE, BLACKBAND (17 inches thick), on the north crop of the basin, some of which have been lately worked by the proprietor, and are now in a state for immediate operations. The coal is well-known in the London and other markets as Cox's Stone Coal.

Further particulars to be had of Mr. M. G. Steward, mining engineer, Bedminster, Bristol; of the proprietor, Mr. Evan Jones, on the property; or at the office of Mr. Alex. Cathcart, solicitor, Neath.

TO IRONMASTERS, RAILWAY DIRECTORS, ENGINEERS, and FOUNDERS.—The SUBSCRIBER having been appointed SOLE AGENT in LONDON for the SALE of MR. MORRIES STIRLING'S PATENT IRON, begs to intimate that he is prepared to SUPPLY Railway Companies, Engineers, and Founders, with the PATENT MALLEABLE and TOUGHENED CAST-IRON, and that all orders addressed to him for these, and also for RAILS, with Hardened Surfaces, shall have his prompt attention.

Specimens of the different Irons shown, and every information afforded, on application. Information as to the terms of Licenses under Mr. Stirling's Patents will be given by the subscriber, and also by Mr. JEE, C.E., 6, John-street, Adelphi. A. MAGNAUHT.

OFFICES.—2, Queen-street-place, Upper Thames-street.

WAREHOUSES.—Paul's Wharf, 25, Upper Thames-street.

SEWERAGE OF LONDON.—The ATTENTION of the COMMISSIONERS appointed to determine upon the MOST EFFICIENT MATERIAL for the CONSTRUCTION of the SEWERS OF LONDON, is particularly directed to the ASPHALTE of SEYSEL, which more than any other material is applicable to the CONSTRUCTING and INTERNAL COATING of BRICK CULVERTS and OTHER CHANNELS FOR DRAINAGE.

The experiments made by the Royal Artillery on the embrasures of Plymouth Citadel, constructed of Seysel Asphaltic Brickwork, under the orders of the Hon. Board of Ordnance, have fully proved the superiority, adhesiveness, and strength of Seysel Asphaltic over all other cementitious compositions. A printed account of these experiments can be had on application to Mr. J. FARRELL, Secretary.—Established 1838.

Note.—The application of the Asphaltic of Seysel is specially recommended by the Commissioners on the Fine Arts for covering the ground line of brickwork in marshy situations, and it has been suggested that it would be peculiarly applicable for covering the areas of closed graves yards, and for the construction of catacombs.

MR. JAMES CROFTS, of 4, KING-STREET, CHEAPSIDE, MINING BROKER, OFFERS his best SERVICES to CAPITALISTS for the PURCHASE or SALE of MINING SHARES, and transacts business only for principals.

Mr. CROFTS has FOR SALE SHARES in the following MINES:—West Polgoon, Wheal Providence, Allt-y-Crib, Cockley Beck, Wheal Brewer, Trewnav, Silver Valley, Wheal Golden, Bronfloyd, Wheal Zion, Okel Tor, South Tamar, East Tamar, Bodmin Consols, Warleggan, North Fowey Consols, Calstock Consols, &c., and can PROCURE or SELL SHARES in all DIVIDEND MINES.

\* \* \* Mr. CROFTS is a BUYER of LAMHEROE WHEAL MARIA.

The increased capital thrown into the market by the payment of the last quarter's DIVIDENDS and Government Stocks, having produced a considerable movement in mining shares, early purchases, in order to avail of moderate prices, are recommended. Mr. CROFTS will (confidentially) give an opinion of the value of any mine within his knowledge, either personally or by letter.—Dated Oct. 25, 1851.

MR. EVAN HOPKINS, C.E., F.G.S., OFFICE, 13, AUSTINFRARIAS, LONDON.

Mr. HOPKINS'S OFFICE is SUPPLIED with PLANS and SECTIONS of the principal MINES in the UNITED KINGDOM.—The REPORTS, and all essential particulars, are fully and regularly RECORDED; these, together with possessing a thorough practical knowledge of the business in all its details, and being ENTIRELY FREE FROM SHARE DEALING, render the office a proper, and as yet the only, place where DISINTERESTED INFORMATION can be OBTAINED.

The object of the office is to communicate information on all subjects connected with General Science—on Mineral Properties in all parts of the world—to protect legitimate Mining—to see justice done to the Capitalists and Property, and to point out the necessity of placing such speculations in the hands of responsible business men. Capitalists, will, therefore, have themselves to blame, if they allow their property or capital to be wasted by jobbing and inefficient managers.

\* \* \* Annual clients are regularly supplied with every information that may be required on home and foreign speculations.

GENERAL MINING OFFICES, 33, Threadneedle-street, London.

MR. JOSEPH JAMES REYNOLDS, late of CAMBORNE, CORNWALL, begs to inform his friends and the public that he has COMMENCED BUSINESS as a MINING and GENERAL AGENT at the above office, and trusts, by paying a due regard to the welfare of his clients, that he will at all times merit their confidence. Having been connected with the management of mines in the most productive districts of Cornwall upwards of twenty years, and being in communication with some of the most respectable agents in the mining districts, Mr. Reynolds will be enabled at all times to furnish such information as may be relied on.

Mr. REYNOLDS has SHARES FOR SALE in the following MINES:—Black Craig and Craigton, Ballygally, Bodmin Consols, Calstock Consols, Carvallion, Cook's Kitchen, Daren, East Caradon, East Wheal Frances, East Pool, East Wheal Rashleigh, Great Wheal Baden, Great Sheba Consols, Great Bryn Consols, North Pool, North Fowey Consols, North Tolgas, North Wheal Alfred, Okel Tor, Pendavore and St. Aubyn, Rock and Treverbyn, South Frances, South Caradon, Sydney Godolphin, South Phoenix, Trebollo Consols, West Basset, West Stray Park, Wheal Emma, Wheal Gill, Wheal Lovel, Wheal Susan, Wheal Unity, Wheal Zon.

J. J. REYNOLDS will carry on business upon COMMISSION ONLY, making no intermediate price between buyers and sellers, and will be ready at all times to introduce the buyer and seller of any shares to each other.—Office hours Ten to Four.

MESSRS. FRANCIS & CO., in order to avoid the complicated and indefinite system of CALLS for working or proving mines, consider that a better and more satisfactory one will be found in offering the public those chiefly in which the machinery and underground work required to bring them into a state of profit has been completed and paid for.

In mines thus far advanced, it will be obvious that as there will be no risk, so there can be no liability for calls—the speculative part of the adventure having been gone through, and in this way capitalists will be enabled to invest with the certainty of immediate return.

Mr. MATTHEW FRANCIS takes leave to announce, that he has several THOUSANDS of POUNDS WORTH OF SHARES to DISPOSE OF, which, at the selling price, give a profit of from £20 to £40 per cent.

\* \* \* Offices, No. 7, John-street, Adelphi, London.

MR. THOMAS JORDAN, METAL BROKER, No. 75, OLD BROAD-STREET, CITY, exclusively AGENT for one of the BEST MAKERS of HAMMERED IRON, for MARINE, LOCOMOTIVE, and other ENGINES. Also AGENT for the SALE of SOUTH STAFFORDSHIRE and WELSH BAR, BOLT and BOILER PLATE IRON, in all its varieties.

The Proprietors of Lead and Copper Mines in Devon, Cornwall, Wales, &c., will find great advantage in the quality and cheapness of the Iron they require, by seeking quotations through the Advertiser.

MINING OFFICES, REDRUTH.—JOHN ROBERT PIKE, GENERAL SHAREBROKER (on Commission only), being resident in the centre of the Mining district, POSSESSES GREAT FACILITIES in the DISPOSAL OF PURCHASING SHARES, INSPECTING MINES, &c., on the most moderate and honourable terms.

MINING INVESTMENT.—T. FULLER AND CO., NO. 51, THREADNEEDLE-STREET, LONDON, beg respectfully to inform the public that they are in a position to BUY and SELL in all the DIVIDEND-PAYING MINES, which they present purchase will pay from 15 to 25 per cent., and have on hand Bedford United, Devon Great Consols, Mary Ann, Trelawny, West Caradon, Great Wheal Friendship and Venton, Boringdon Park, Wheal Catherine, Franco, Zion. Also shares in Wheal Williams—this is a continuation of the Devon Great Consols, and embracing several of the same localities; also Devon Consols North—this adjoins the latter, which, with £1 paid, are marketable at £300, and paying £4 per annum in dividends.—Every information given, either personally or by letter.—Office hours from Ten to Four.

MR. PEET, MINING AGENT AND GENERAL SHAREBROKER, has REMOVED to the ABOVE CONVENIENT OFFICE. The same attention paid as hitherto to all MINING BUSINESSES of legitimate character; and in thanking his friends for former commissions, he solicits a continuance of their kind support.—OFFICES of Wheal May, Pentire Glaze and Pentire United Mines, Devona Consols West, and Wheal Hamlyn.—The strictest confidence observed in all transactions, and the registry of shares will be free, unless a sale or purchase takes place.

MR. GEO. CARNE, DEALER IN STOCKS AND SHARES, 28, THREADNEEDLE-STREET, LONDON.

MR. JOHN DAVIES, MINING SHAREBROKER, NO. 38, TOWER-BUILDINGS, TOWER-GARDEN, LIVERPOOL.

MOLYNEUX & CO., MINE AGENTS, NO. 34, THREADNEEDLE-STREET, have SHARES ON SALE in DIVIDEND-PAYING and OTHER MINES, which will ensure to CAPITALISTS the safest and most unexceptionable investment.

\* \* \* Offices of the Wheal Langford and Baring United Mining Company, and Trebollo Consols Mining Company, No. 34, Threadneedle-street.

SHARES ARE TO BE SOLD in the following MINES,

VESSELS, &c.,  
West Alfred Consols  
Wheal Reeth  
Balleswidden  
Wheal Margaret

West Wheal Town  
Wheal Franco  
Providence Mines  
Lelant Consols  
East Balleswidden

Barrel LEGERDALE ..... A 1, 13 years—2 years old.  
TELL TALE ..... A 1, 12 years—clipper schooner.

CHARLOTTE ANNE ..... A 1, 12 years—ditto

B. P. BATTEN, 1, Crown-court, Old Broad-street, London.

REGISTRY FOR THE SALE AND PURCHASE OF MINING SHARES.

DURRANT & CO., MINING SHAREBROKERS, 58, LOMBARD-STREET, LONDON, Beg to draw the attention of Capitalists to their REGISTRY for the SALE and PURCHASE of SHARES FOR DISPOSAL.

Wheal Mary Ann  
Carn Brea  
West Caradon  
Trelawny

Wellington  
West Buller  
Tolgas

South Caradon  
Great Wheal Sheba  
Trelawny  
Bedford United

Mr. J. C. Durrant, 58, Lombard-street, London.

N.B.—Statistical information furnished on British and Foreign Mines.—No CHARGE made for the registration of shares unless business be transacted.

TESTIMONIAL TO MICHAEL WILLIAMS, Esq.—

The Committee beg to announce that subscriptions may be paid to the East Cornwall Bank, at Liskeard and Bodmin; the Cornish Bank, Truro, Redruth, and Falmouth; Messrs. Bollithos, Penzance, and St. Ives; Mr. Carne's Bank, Penzance; or to either of the following gentlemen—viz., Mr. H. Grylls (the Treasurer), Redruth; Mr. R. Pearce, Penzance; Mr. S. James, St. Just; Mr. R. B. Michell, Marazion; Capt. Thomas Richards, Fowey House, Hayle; Mr. R. H. Pike, Camborne; Mr. W. Burgess, Illogan; Mr. F. Foy, Town-hall, Redruth; Mr. Little, Redruth; Mr. E. H. Hawke, Tolgus; Mr. Day; Mr. R. Pearce, Royal Hotel, Truro; Mr. R. Broad, Falmouth; Mr. J. Morcom, St. Austell; and Mr. Field, Mining Exchange, London.

No subscription to exceed Five Shillings. Any smaller sum will be received. The list to be closed on the 29th November.

THOMAS GARLAND, Hon. Secretary to the Committee.

Redruth, Oct. 9, 1851.

MR. T. P. THOMAS, MINE AGENT, 75, OLD BROAD-STREET.—Established nine years.—Mr. T. P. THOMAS begs to inform capitalists and the public that he is at all times in a position to BUY or SELL, at close market prices, in dividend and respectably established BRITISH and FOREIGN MINES; and having a local knowledge of the principal Cornish and Welsh Mines, from periodical personal inspection, &c., will be happy to furnish information by post or otherwise.

N.B.—Mines inspected and reports furnished.

MINING PROPERTY.—Mr. HERRON has SHARES in the best DIVIDEND-PAYING MINES FOR SALE, and will give the purchaser 15 to 20 per cent. for the outlay. Amongst others are the following:—

Trethao	Botallack	Lewis
Cobre	Levant	Devon Great Consols
St. John del Rey	West Wheal Rose	Trevikey

## ON THE SULPHITES, NITRAMILINE, TOLUIDINE, &amp;c.

[We promised our readers to return shortly to the subject of Dr. Muspratt's testiment and his discoveries. The fame of the Liverpool Professor, and to his honour be it said, now equals, if it does not exceed, that of any British chemist. His contributions to science, and his School of Chemistry, are a world's talk; and the popularity he has given to science places him, side by side, with his illustrious preceptor, whose celebrity in this country may in a great measure be ascribed to the prominent part played by his once "favourite pupil." The *Lancet* has said—"Of Dr. Muspratt's merits as a scientific chemist we need not write one word; his reputation is not confined to our own schools or our own country; and he is supported by testimonies from celebrated chemists at home and abroad, such as few other men could obtain." And the *Examiner* writes—"To add one word to such eulogiums would be as presumptuous as superfluous." Dalton has made Manchester as renowned in science as manufactures. What did he get for it?—Fame. Dr. Muspratt has made Liverpool as great in science as in commerce—What has he got for it?—Nothing; he had fame before he went there. This is the way enlightened England treats her "glories!" On the recent Royal visit, we think that the Sovereign of this mighty realm might have bestowed some honour upon the founder and successful principal of the Liverpool College of Chemistry. We feel convinced that all the friends (and among them we might number some of the brightest names in science or literature) of Professor Muspratt would have felt rejoiced at the bestowal of any Royal favour upon one so well entitled to the admiration of the country. Charles Dickens, our great writer, said some time ago, "I sincerely hope that Liverpool will one day—and not long hence—endeavour to find some expression for the obligation she owes to Dr. Muspratt." We re-echo the sentiment, and trust that the birthplace of Rescoe will prove an exception to the ancient proverb, that "a prophet is not honoured in his own country." We could, with pleasure, write volumes upon this theme, for Dr. Muspratt was one of our earliest contributors, and we have ever entertained the highest respect for his genius and many worth; but his position cannot be raised by any praise of ours. The following is the continuation of his early testimonial.—Ed. *Mining Journal*.]

BARON BERZELIUS.—Although I have not the honour of a personal acquaintance, still your name is well known to me by the new facts which the science we cultivate in common has acquired by your investigations. It affords me real pleasure to give you a testimonial, which you will see appended. Having been requested to state my opinion upon the chemical investigations which Dr. Muspratt has published alone, as well as upon those brought out in conjunction with Dr. Hofmann, I can testify with much pleasure that they have contributed to enrich chemistry with new facts of very great interest.

Professor DUMAS, in introducing him to Professor Regnault, wrote:—"His name is a sufficient recommendation."

DR. FRSENIUS.—During the residence of Dr. Muspratt in Giessen, he devoted himself strenuously to the study of practical and theoretical chemistry. Although he possessed a sound knowledge of the science when he came, still he recommended in Liebig's laboratory the practical part, in order to familiarise himself with all the methods of analysis. When this was accomplished, he undertook investigations both in inorganic and organic chemistry. The extreme diligence and carelessness exercised by Dr. Muspratt, as well as the fine results with which he enriched science, are appreciated only by a personal of his scientific and literary publications, which are his worthiest and best certificates.

DR. C. BRÖGMANN (Professor of Pharmacy in the University of Bonn).—Amongst the researches published of late years in organic chemistry, those of Dr. Muspratt deserve great attention, as they show that the Doctor not only possesses a high degree of proficiency in experimenting, but furnish proof that he is a perfect master of the theory of the science. From these circumstances, his researches have obtained general consideration and acknowledgement, and have been regarded as excellent additions to chemistry. Of these investigations I shall mention the production of valeric acid from indigo; his treatise on new processes in which aniline is formed, published jointly with Dr. Hofmann. These results in organic chemistry could only originate in a perfect knowledge of the facts which are taught by inorganic chemistry; and Dr. Muspratt's researches on the sulphites show that he has also contributed to enrich the latter.

Professor KUHLMANN (of Lille).—The opinion which I should pass upon your investigations would be of little value after the illustrious Professor of Giessen has made a just appreciation of them. This favourable testimony, independently of being confirmed by other distinguished authors, is in France by Prof. Laurent, must insure you the goal to which you aspire. To such a testimonial I cordially subscribe; but it cannot acquire more force by this. I can scarcely express to you the great desire I feel to see you soon in a position in which you can give yourself up entirely to the teaching of a science which possesses all your affections, and in which I am happy to find an adept like yourself, capable of extending its limits. I shall receive with the greatest delight the promised copy of your work on the Blow-pipe. In editing this work you have acquired another right to the gratitude of chemists. Every chemist must have read with great delight your last essay, in which you were engaged with Dr. Hofmann, concerning the discovery of a new alkaloid—toluidine, and which you have rendered so remarkable by its analogy to aniline.

DR. H. ROSE.—Dr. Muspratt, of Liverpool, has published several investigations in *Liebig's Annalen der Chemie und Pharmacie*, which prove that he is an excellent chemist, and, therefore, entitled to great expectations.

DR. CLAMON MARQUANT (chief of the Pharmaceutical Institute of Bonn), in a letter to Dr. Hofmann says—"I have read attentively the memoirs published by Dr. Muspratt, and that by so doing an opportunity has occurred of observing his thorough knowledge of inorganic and organic chemistry: in the former, his profound and comprehensive labour on the sulphites shed a new light on that department of the science, by demonstrating the interesting analogy subsisting between the sulphites and carbonates. Of equal importance appear to be his experiments on the pretended formation of valeric acid from indigo."

[We have now translated the leading foreign testimonial. If the above are the opinions expressed on Dr. Muspratt's attainments nearly 10 years ago, what pride the writers of them must now feel with respect to them? Within the hour we have received Dr. Muspratt's last paper on *Citrifusilic Acid, a new acid from clover*, which will be soon reviewed in our columns.—Ed. *Mining Journal*.]

## ATMOSPHERIC INFLUENCES.—NEW SERIES—No XII.

BY FRANKLIN COXWORTHY, AUTHOR OF "ELECTRICAL CONDITION."

Before proceeding to the consideration of another important feature connected with evaporation, which our apparatus has brought to light, we are induced to offer a few remarks on the comparative value of the electrometer as an indicator of epidemic diseases, either of the animal or vegetable kingdom; and it will be observed, on reference to the table given in the Journal of Sept. 20th, that the means of 1845, 1846, 1847, 1848, and 1849, are 36, 30, 31, 31, and 27. The potato disease commenced in 1845, and raged in 1846, progressively declining during 1847 and 1848, and disappeared in 1849—therefore, the indication of 1846 should be equal to that of 1845, and greater than those of 1847 and 1848, a discrepancy that will not be found in the scales; and if the information afforded by the electrometer be applied to the epidemics of the animal kingdom, it will be found no less wanting. The indications of the instrument are governed, in fact, mainly, if not entirely, by the "temperature" of the air—it has no connection with the earth—and in this respect afford strong evidence, if such were needed, of the identity of electricity with heat.

We have already adduced evidence that evaporation is not referable to "heat," and it being evident that this fact cannot fail in directing attention to the several purposes to which heat is applied, and, possibly, in suggesting a modification in the appliances by which it is generated, the truth of this subversive principle cannot be too forcibly impressed. On reference to our register for the month of September, 1851, we find that, from the 2d to the 6th inclusive, the mean temperature was  $67^{\circ}$ ,  $67^{\circ}$ ,  $64^{\circ}$ ,  $59^{\circ}$ , and  $57^{\circ}$ ; whilst the total evaporation for each day respectively was, in grains, 265, 270, 240, 405, and 360; so that, with a decrease of temperature of  $10^{\circ}$  from the 2d to the 6th, there was induced more than double the amount of evaporation, the weather throughout the period being beautifully fine, and the wind in much the same direction, from north to north-east. We could, however, likewise adduce instances in which a decrease of temperature is attended with decrease of evaporation, and an increase of temperature with increase of evaporation; but sudden changes are generally, if not invariably, adverse to existing doctrines; and on this question the following statement cannot fail in exciting much interest:—

Date.	Mean temp.	Reduced scale.	Evap. grains.
1850—July	69°	39	11,515
August	61°	29	12,400
September	59°	24	9,460
October	49°	17	5,730
November	46°	14	5,010
December	40°	8	1,380
1851—January	43°	11	4,125
February	39°	7	2,985
March	42°	10	5,285
April	46°	14	5,970
May	53°	21	10,625
June	59°	27	15,075
July	64°	32	12,895
August	63°	31	13,530
September	58°	26	9,570

In our papers of 1847, a comparison was attempted of evaporation and temperature, but our vessels having been then replenished by measures, and not by weight, we are not induced to draw any comparison between the results then afforded and the above; nor do we place reliance on the mean temperature of Sept. 1851, having been absent from home from the 11th to the 28th, inclusive; the mean, therefore, that of the remaining days.

The faulty nature of the thermometer in use in this country has frequently been the subject of comment, but the evil has hitherto been endured, because the remedy was not imperative. It must be obvious, however, that an addition of  $3^{\circ}$  to the real temperature of July will merely double the amount, whilst a similar addition to that of December ( $8^{\circ}$ ) increases it fourfold—a discrepancy that must be fatal to any comparison between "temperature" and evaporation. We have, therefore, taken the liberty of reducing the scale to the real representative figures, between which and the evaporation the proportion are drawn. An alteration in the scale of the thermometer is now imperative, and the adoption universally of an instrument divided into  $200^{\circ}$  from the freezing to the boiling point, as suggested some time since in the Journal, would unquestionably be a great improvement.

It will be observed, on reference to the above statement, that June stands highest, both as regards actual evaporation and proportion to temperature; and although it may be remarked that, whilst it raised on 14 days in July, and only 8 in June, still there were only 8 wet days in Aug., but 15 in March, and 18 in April—a circumstance to which we are induced to direct attention, it being a fact worthy of notice that the evaporation is frequently greater whilst it is raining than it is a few days before rain. We have much to learn on this highly-interesting subject, and our results having been published since 1847, we did hope that long ere this our apparatus would have been tested, and, if found correct, applied by the Government to the solution of so important a question, identified

as it is with the diseases of the animal and the vegetable kingdoms. For the reasons already assigned we are not desirous of drawing a monthly comparison between the evaporation of former years and the present period; but the evaporation of the potato disease being so enormous, as to place out of question the total difference being referable to error, we are induced to tabulate the results given in the *Chemist* for Sept., 1847, the outcome being reduced to grains; and we should observe that the thermometer was not then, as it now is, kept under the same roof with the evaporating dishes.

Date.	Mean of Temp.	Reduced scale.	Evap. grains.
January	38°	6	2,760
February	38°	6	6,240
March	41°	12	10,000
April	47°	15	14,400
May	58°	26	22,560
June	65°	34	32,160
July	67°	35	29,280
August	64°	32	17,280
September	62°	30	16,320
October	52°	20	8,160
November	48°	16	6,240
December	36°	8	2,760

Prof. Gorini, who is professor of natural history at the University of Lodi, has made a very remarkable experiment illustrative of his theory as to the formation of mountains. He melts some substances, known only to himself, in a vessel, and allows the liquid to cool. At first it presents an even surface, but a portion continues to ooze up from beneath, and gradually elevations are formed, until at length ranges and chains of hills are formed, exactly corresponding in shape with those which are found on the earth. Even to the stratification the resemblance is complete, and M. Gorini can produce on a small scale the phenomena of volcanoes and earthquakes. He contends, therefore, that the inequalities on the face of the globe are the result of certain materials, first reduced by the application of heat to a liquid state, and then allowed gradually to consolidate.

THE POST-OFFICE LONDON DIRECTORY FOR 1852.—The fifty-third annual edition of this useful work has just appeared; and, judging from its contents, it is by no means inferior to its predecessors, and fully sustains the reputation it has so well earned, as being the only correct key to the names and addresses of the several trades and professions in this vast metropolis. A new feature appears in this edition, which has hitherto been omitted—we allude to the scientific directory, which gives the names and addresses of the members belonging to all the scientific institutions, societies, and learned bodies. In addition, there is a general alphabetical directory, professional directory, classification of trades, court guide, guide to all the Government offices, Parliamentary companion, list of bankers, street key, postal information, conveyance, miscellaneous information, together with map of London, corrected up to the present time. As a work of reference it is decidedly most useful and necessary to the man of business. No banking or merchant's office should be without it. A smaller edition has likewise been published, which, though not so comprehensive as the larger, contains an immense mass of useful information, and both the works are eminently entitled to the name of "handbooks to the commerce of the first commercial city in the world."

SERIOUS CHARGE OF CLOSING UP A COAL MINE.—At the Court House, Wakefield, Mr. Marsden, solicitor, on the part of Messrs. Stansfield, and Co., Flockton, coal proprietors, preferred a charge against H. Hobson, a miner in their employ, for obstructing an air-gate in a coal pit, in which he worked.—Mr. Marsden said that although the case was one which, under the circumstances which would be detailed to them and proved, in some degree merited the severer punishment to which the defendant would be liable by treating it as a felony, and sending it to the Sessions for trial, he thought he should not do so, but simply treat it as one of breach of duty in the defendant towards his employer, under the Servants' Act. Mr. Marsden then detailed the case, and called defendant's fellow workman, who proved that on the 26th Sept., he was in the coal pit of the company, at Flockton; that he went to the bank at which defendant was working. The air was stopped, and down behind the defendant, in the air-gate, he found that two turn boards had been fixed, and his clothes laid on the top, which had the effect of stopping the air to the rest of the pit. He told him the danger of his conduct, and he then began to pull them down. The following day, finding there was more fire-damp in the pit than usual, he again went to Hobson's bank, and found the air blocked out again in the same manner. He said he would tell the bottom steward, and did so accordingly. Defendant said he might do so. By Mr. Wainwright: Defendant was nearly naked when I told him of it; he said he had done it because it blew so cold upon him, it starved him. The air was nearly all blocked out: there was a small opening left. It would be a hole of not more than about 10 inches by 6 or 7. A. Micklefield, a hurryer for defendant, proved that he saw the defendant do the act complained of. J. Ramsden, the bottom steward, proved the finding of the air blocked in the manner described. He asked defendant what he had done it for. Defendant said because it starved him to death. Witness told him that it would burn them all to death; the defendant then set about pulling them down; 104 persons were working in the pit, whose lives were all risked by defendant's conduct. Mr. C. Morton, the Government Inspector of Mines, said he had examined the pit and plan alluded to, and considered that the lives of all the men in the pit were in danger during every moment the obstruction continued. The pit was of itself a very dangerous one, and rendered the use of the Davy-lamp, absolutely necessary. Mr. Wainwright said he could not but feel that defendant was indebted to the prosecutor for treating the case in this summary manner: he, however, called the Court's attention to the fact that defendant was working close on the spot, and his own life might be said to have been in the most imminent danger. It was clear the defendant had acted ignorantly; and after other remarks he produced a certificate from a medical man, to show that defendant had been of very weak intellect from his infancy. And then said he would leave the case in the hands of the Court, in the hope of their dealing conscientiously with his client, which he thought he was, under defendant's circumstances, entitled to ask. The chairman said that had it not been for the apparent ignorance of the defendant, and the certificate produced, he should have sent the case to a higher tribunal. Such a case deserved transportation, or other severe punishment. The Court would, however, treat it summarily, and sentenced him to the House of Correction for three months, with hard labour; and he hoped that it would act as a warning to all persons in similar circumstances.

RAILWAY TIMBER.—The process of preparing the timber after its conversion is one of much interest, and shows the advance which has been made in these processes under the stimulus which has been afforded by the increase of railway works. The timber, when converted, is raised upon railway trucks, packed in a convenient cylindrical shape, and wheeled into the cylinder prepared for its reception. These cylinders have somewhat the appearance of long engine-boilers or large tubes, and the railway traverses it. When the truck of timber has been conveyed into it a steam-engine connected with an air-pump is set to work, and the air is exhausted from the interior of the cylinder. When this process of exhaustion is partially completed, the preparation of creosote or chloride of zinc (as the case may be) is turned in, and when the timber is surrounded and the cylinder filled with the solution, a force-pump is used, by which it is injected into the pores of the wood, the pressure being as high as 150 lbs. to the square inch. The cubic contents of the wood being known previous to being placed in the cylinder, and the capacity of the cylinder also being known, the injection of the solution is continued until the proper amount is absorbed by the wood. This process occupies about two hours and a half. The solution is then drawn off, and the preservative process being completed the timber is withdrawn, and another load follows. On sawing through the timber it is found that the solution has penetrated to the very centre of the timber, such is the effect of the hydraulic pressure employed. The effect of the burning of the Burnettising process—the chloride of zinc—is clearly apparent on the exterior of the timber, which is only slightly coloured, whilst that submitted to the action of the essence of tar, or creosote, is blackened. The timber can be "Burnettised," at a cost of about 12s. per load, and is then impervious to the effects of damp or insects, and is, in fact, nearly indestructible.

MINING IN IRELAND.—A lease has just been taken of Mr. H. Notter's Killbarry Mine, Kilmoe, by a highly influential party of private gentlemen, of London; and, within the last few days, Mr. Henry Thomas, the manager of the Crookhaven Mining Company of Ireland, has received instructions to proceed at once with the preliminary works, previous to extended operations. We congratulate the gentlemen embarked in this promising concern in the choice of their manager. We believe a better selection could not be made. At the Crookhaven Mine the works are progressing vigorously and satisfactorily. During the last fortnight we are informed that 1000. worth of rich copper ore has been raised. The new engine-shaft is being sunk with great spirit; the engine-boiler and crusher-houses are let to build by contract, and the steam-engine, crusher, and all the mining materials, recently purchased at the Barrington Mines, county of Wexford, are expected at the mines in another fortnight. The works in every department are prosecuted with business-like energy, and the prospects indicate a rich and lasting mine.—*Cork Reporter*.

STEAM NAVIGATION.—After the 31st March next no steam-vessel is to proceed to sea, or to steam upon the rivers of the United Kingdom, without having a safety-valve upon each boiler, free from the care of the engineer, and out of his control and interference; and such safety-valve is to be deemed to be a necessary part of the machinery, upon which the engineer-surveyor is to report to the Board of Trade. This new regulation is ordered by the 21st section of the Act 14 and 15 Vic., cap. 79.

HOLLOWAY'S PILLS A MOST DESIRABLE AND EFFECTIVE REMEDY FOR BILIOUS COMPLAINTS AND DISORDERS OF THE STOMACH.—Extract of a letter from Saranac to Prof. Holloway, dated July 5, 1851:—"Sir: For a considerable time I laboured under a severe bilious complaint, and never could digest anything that I ate; in consequence of which I passed many sleepless nights. I tried various remedies without obtaining any relief; I then took a few of your invaluable pills, which have wrought a perfect cure, and I now feel quite well, and enjoy my food better than ever I did in my life. Signed, J. P. C. Van de Lande Paramaribo."—Sold by all vendors of medicine, and at Professor Holloway's establishment, 244, Strand, London.

## Original Correspondence.

## THE GERMAN SCHOOL OF GEOLOGY.—No. V.

BY DAVID MUSHET, ESQ.

I am surprised to a degree how Mr. Faber could venture such an argument in the face of the most certain facts. Insoluble as quartz is by mechanical applications, its crystals are one of the commonest occurrences in Nature throughout every kind of rock; whence come silicious and calcareous petrifications, tufas, stalactites, which we may see formed before our eyes, if Mr. Faber's argument has the slightest basis. Flints, agates, and other silicious pabbles, are considered to be indisputable proofs of their aqueous origin—seeds and the minutest fibres of vegetables being replaced by silicious depositions. Surely Mr. Faber knows all this. The great quantity of potash in the primitive rocks makes their formation from aqueous solution a matter of less difficulty, if there is any difficulty at all in believing what we see, than that of any other series. Mr. Faber, of course, knows the liquor of flints—a soluble jelly when moist, but absolutely insoluble after it has congealed. The laboratory of Nature is replete with solvents and re-agents for all her purposes. Water is the grand menstruum in which she forms everything by the electric influence—the complicated organisms of animal life, the intermediate structures of vegetables ungifted with locomotion, and the inferior, but also organised, body of the terrestrial sphere—the crust, the bark, which covers and conceals the interior. The

To these geologists have given a variety of names, often arbitrary and capricious; for chemical analysis in such variety is impracticable—for the most part, according to colour; but in the following of Adam we must give every thing a name, which often imparts far more satisfaction than a knowledge of the substance which it faintly shadows. Black, red, and white are the principal colours passing as mica, felspar, and quartz. There are all sorts of intermediate shades, from deep purple, green, and yellow, to light grey; but the three first are the predominant tints. When these substances, instead of being separated in thick beds, are intermingled, they form the granites of commerce, and the mixture is more complete in the body than on the flanks of mountain ranges. They are most compact and durable when the quartz predominates, the rib and bond of such ridges. We have speculate (not spheres) of mica in a white base, stries of quartz, which sometimes, even in the same quarry, will alter to the red of felspar, coursing through a black base, white crystals in a red base, and mixtures of all three, giving, according to the predominance of mica or felspar, the ordinary red and grey granites, lighter or darker in hue, according to the proportion of quartz. Hills of black rock, where there is no felspar, may be seen intersected with small veins of white quartz, offering a structure so similar to black limestone intersected with veins of carbonate of lime, that it is not a cursory glance will detect the difference of two specimens; and, if I mistake not, such rocks have actually been reported on as limestone by hasty tourists.

[To be continued in next week's *Mining Journal*.]

#### MINERAL RICHES OF WALES—NANTLLE VALE, CARNARVON.

SIR.—This beautiful romantic valley, which runs in a south-eastern direction from Pen-y-groes, about six miles from Carnarvon, to the foot of Snowdon, has for some years past, although abounding in mineral riches, been comparatively neglected. It is said to have once been an immense forest, and infested by wild beasts, which becoming troublesome to the surrounding population increased, a reward was offered by one of the Henrys for every head that was destroyed: this induced the inhabitants to commence their extermination on a large scale, which they effected by means of fire, but to the total destruction of the forest; this, however, was a matter of little consequence, for in a few years the mountain slopes, for a mile on either side of Nant-Nantlle Lake, became the abode of human industry, in the cultivation of numerous farms, and those beautiful meadows that now adorn the entire length of the valley.

In subsequent years the discovery of two immense slate veins, with the knowledge of applying them to useful purposes, induced the natives to open small quarries; and although they were deficient of any means of transit for the produce, except that of being taken to the towns on the backs of horses and mules, yet the workings appear to have been sufficiently remunerative, for we are told that at the beginning of the last century a large quarry was in work, employing many men, who lived up in the mountains. This, no doubt, was part of the old Cilgwyn Quarry, for there are evident traces of very ancient workings. In the course of time roads were made down the mountain, and connected with the shipping port of Carnarvon, with increased facilities for exporting the produce; so the workings progressively increased, and at length they became of such considerable importance, that a public company was formed to construct a railway direct from the quarries to the port, which was at length effected at a large cost. At this date there were 10 or 12 quarries in work, and we are told that from one of them 400 tons of marketable slate was produced weekly; the slate was of the best description, and held in high estimation by the public, and for which there always was, as there now is, a great demand.

About 10 years since two or three of the largest quarries, from some cause which is unnecessary here to explain, were suspended; they have, however, within the last two years, been resumed. There are now eight quarries in work, with several others just about recommencing—all of them are either paying large profits to their respective proprietors, or on the eve of doing so; and it is with the view of conveying to the capitalist and the public the important advantages derivable from this source of investment that we furnish your *Journal* with this brief description of the wealth of this valuable valley. The veins are two in number, running in nearly an east and west direction, each varying in width from 100 to 300 feet; the north vein is principally composed of blue slate, while the south has that red or pinky blue colour which is so much admired in London.

The first on the north vein is the Cloddfarcoed Quarry, 240 feet deep, from whence have been taken some of the finest slates ever produced in this or any other country; it is somewhat narrow and confined, and at present full of water. The property has, unfortunately, got into Chancery, but we are informed that it will soon be released, and again set to work.

The next is Tal-y-Sarn, an extensive work, conducted for some private individuals, under the able management of Mr. Bonus, a gentleman respected by every one who has the honour of his acquaintance, for his talents as a quarry-man and general urbanity of manners.

Higher up the mountain are the extensive quarries of Cilgwyn, from which the largest returns have been made; they were worked for many years by the late Mr. Musket, but on that gentleman's decease were very much abused, and eventually abandoned. They are now again set to work, on a small scale, by a local company, and so far as the workings have been re-opened are returning a handsome profit. We are reputably informed, that the works will in a very short time be carried out to a large extent—negociations being now in progress for an advance of capital commensurate thereto.

At the foot of these quarries a small quarry, the name of which we have forgotten, has lately been set to work by six working quarrymen; and although they are struggling against the difficulties of want of capital, yet they are saving money, and there is every hope, in a short time, they will be amply rewarded for their exertions.

The Dorothea Quarries are next in the valley, by the side of the Lake, worked by a local company, who commenced with scarcely any capital, but are now beginning to make good profits; they are extending their works, and will, in a short time, have a fine quarry—the only drawback to their more rapid progress is, they are compelled to use steam-power for hauling and pumping.

Above this is the Pen-y-bryn Quarry, in full operation, doing well, and making good profits.

Again, still higher up, is the Pen-oreoed Quarry, from which the proprietors have amassed a little fortune, although commencing with scarcely any capital.

Higher up the mountain are two other quarries, which are said to hold out great promise, but at present in an inefficient state of working.

On the opposite side of the Lake are four or five quarries, only three of which are in work—the first is Ty-Maur, which, during the past week, has been purchased by a London Company, who intend to work it on a large scale; we met their engineer on the works, who was engaged in preparing for the erection of the necessary machinery; from this quarry some of the finest, as well as some of the most extraordinary, slates are obtained—so beautifully and finely laminated is the texture of the working rock, that we saw slates split 20 in. long, thinner than a sixpence, and so tough that they would bend nearly an inch and a half before they broke.

Close adjoining this is a quarry belonging to Mr. Byford, of Liverpool; they have got their deep level driven up, and are getting into good slate—it is a quarry of good promise.

To the west of this is the Tyn-y-Werglodd Quarries, under the management of Mr. Foley, a gentleman well-known to the readers of the *Mining Journal*. The works are being carried on with spirit; and judging from the appearance of the working rock, which is being opened on extensively, and the beautiful quality of the slates they are shipping off, it holds out a promise of becoming a work of great importance; indeed, we do not see how the quarry can fail, as they have no expensive machinery, nor will require any for many years, with good rock to work on, and plenty of it.

The two other quarries further west are yet idle, being suspended for want of capital.

Nantlle is rich in other things as well as slate; it abounds with copper-lodes of a very promising appearance, intersected with cross-courses, and embedded in a stratum congenial for the production of minerals. A small mine has been worked at Tamow by a few miners; the lode was sunk on at the junction of a canter lode some 6 or 7 fathoms, where a course of ore was found from 3 to 9 inches thick. The adit level is driven up about 40 fathoms, and is intended to communicate with the shaft. No machinery will be required, as there are backs 70 fathoms high above water level. On the adjoining estate a copper mine was worked some few years since by a Liverpool company—it is called Gwernor Mine; the works are now abandoned. About two miles up the valley, and nearer to the foot of Snowdon, are situated the Drws-y-cod Copper Mines, the returns from which are about 100 tons per month; they are very profitable, as no steam machinery is required; they have been working for above 70 years, and may be said to be only now in an infant state.

In concluding this notice, we have only to remark, that the tourist, geologist, capitalist, merchant, or miner, will be amply repaid the trouble of a visit to this rich locality.

#### PIONEER.

SIR.—I have lately seen a letter or two on this subject in your *Journal*, written by "A Practical Miner" at Camborne, or at least one who signed himself as such. He very justly asked a question, which has not been hitherto answered by those flying geologists who appear to know the whole working of Nature's laws. The question is this—Have any of their theoretical reports on different subjects proved at all beneficial, either to the practical man or the capitalist? He also very candidly called upon them to point out one single mine where, by their reports, any important discovery had ever been made; and I would beg again to enforce the same question, without the least prejudice on either hand. Mr. Editor, I consider this a subject of deep importance, and I think it would be only just on your part to enforce the question, because capi-

talists who are not acquainted with mining may still be lead astray, knowing not in whom to place confidence. Example, you are aware, is better than precept; and in future, instead of using vague language, let your scientific correspondents prove to the public their ability, by naming wherein their wonderful attainments and reports have been of service; then, of course, capitalists will know in whom to place confidence.—JOHN SPARGO: *Downgate*, Oct. 22.

#### LEGITIMATE MINING.

SIR.—Much has been said on this subject of late, and no doubt but all who wish mining well will act in a legitimate way to support it. "Common Sense" says it is comprised in this:—"That when a person obtains a sett, he should, previous to bringing it out, ascertain correctly its geological and mineralogical features, the amount of machinery, cost thereof, per centage of ore, calculated produce, expense of dressing, and profits." I admit that all this is very good; but I ask, is it the practice in Tavistock, or in any other district? I admit it is the most legitimate mode of procedure, but can it be expected that those who in general discover sets or lodes can do this of themselves, as the discoveries are generally made by the working miner, and but few of them are prepared to advance 200*l.*, 300*l.*, or 500*l.*, to prove the value of the sett discovered? not but they would gladly devote all they could spare to make the sett appear what they fully believe it to be. I would ask "Common Sense" how a miner should proceed to obtain from 300*l.* to 500*l.* to open a sett which is very extensive, at least a mile square, in which there is to be seen a very fine copper lode, and he wishes to ascertain the value of the sett before he attempts to form a company, to carry out the concern with mining-like spirit? Any information on this subject will be thankfully received through your *Journal*. *City*, Oct. 23.

R. C. M.

#### TICKETING DINNERS.

SIR.—I noticed in your *Journal* of the 11th inst. a letter upon this subject, coming, as I suspect, from a queer fish near the institution at Redruth, evidently concocted while suffering from bile, after partaking of a "surfeit," as he is pleased to term the repast that follows the copper ore sales. Allow me, as one still further west than him, to state that the remarks you have appended at foot are quite correct, and as every tub should stand upon its own bottom, it may be that hundreds of your readers will be anxious to know what these dinners and charges really consist of? I can supply it from an original document, and, therefore, lay it before you.

You have already stated that the cashier of each company is, by rule, entitled to his and his horse's dinner free. The assaymaster and sampletaker divide the fee of 16*s.* to procure their elsewhere. Such is the rule established and agreed on. Since then there has been gradual but shameful encroachments made by these smelting companies' agents, as I shall too plainly show; for, instead of the cashier of each company being satisfied with their own and horses' provender, there is scarcely a sale of copper ore without the presence of the assayer and sampler also (and if not them, the clerk, or some in lieu); thus, the parties receiving 16*s.* to be elsewhere, pocket, and carry away that sum in coin, and partake in the weekly "surfeit," if henceforth it is so to be denominated. Three years ago, thus stood affairs at the copper ore sale that took place at Tyack's Hotel, in this town:—

32 dinners and desert at 4 <i>s.</i> 6 <i>d.</i>	£ 7 4 0	Steward's fee for ditto.....	£ 1 0 0
12 bottles of port at 6 <i>s.</i>	3 12 0	Stationery, pens, ink, &c. ....	1 8 0
10 bottles of sherry at 6 <i>s.</i>	3 0 0	Corn for smelters' horses, &c. ....	1 5 0
Spirit consumed .....	3 0 0	Assayers and sampletakers' al. ....	6 8 0
Ale and porter .....	1 3 6	lownance in lieu of dinners, &c. ....	6 8 0
Lemon, sugar, and cigars .....	0 10 0	eight companies at 16 <i>s.</i> each .....	1 0 0
Servants' attendance .....	1 1 0	Total .....	£29 11 6

The average produce at this sale was 7*s.*; the standard, only 88*s.* 11*d.* The charge per head for each of the 12 mine agents who dined was 12*s.* 2*d.*; the expense charged to the mines being 1*d.* per ton upon the ore.

In such woeful times for the copper miners as on that day, when the average produce was low, and the standard most unprecedentedly so, then would have been the proper time to complain; then ought the excrescence to have been cut off, much better than have suffered it to progress onward, and become, as it now is, doubly enormous. The complaints against the system are innumerable; every mine manager and agent murmur amongst themselves. Yet, it seems neither of the gentlemen who preside three weeks out of every four are disposed to take up the cudgels, because (as it is surmised) they consider it is the duty of the gentleman who fills the chair every fourth week, representing 1600 tons of ore each time, to be the prime mover, as he is by far the largest payer, and the mine he represents pays the largest tax towards the support and continuance of such a bad system.

On the above occasion, as stated in the bill, 32 persons sat down to the 4*s.* 6*d.* dinner (desert included), consisting of fish, flesh, and fowl; no luxuriant made dishes appeared; no tongues tortured into the shape of dolphins or Chinese junk's were there exhibited to please the eye and pall the taste; but a good and substantial spread, and an excellent dessert followed of every sort of ripe fruit in season. The charge for the whole speaks for itself (4*s.* 6*d.* per head), leaving no cause for complaint, neither was there room for it as to the quantity of wine and spirit consumed upon the occasion. Out of the 32 persons present 12 only were representatives of the various mines, and the expense of each of them, 12*s.* 2*d.* per head, was charged to their respective concerns; the steward made the thirteenth, acting as vice-chairman, leaving 19 persons to be accounted for by the eight copper smelting companies, which, according to rule, ought to have been confined to a representative of each firm; therefore, the miners' selling that day paid the smelting agents' fees in money, eight at 16*s.*, 6*s.* 8*s.*, and the dinners, &c., for 11 persons not entitled to be present, at 12*s.* 2*d.* each, is 6*s.* 13*s.* 10*d.*; together, 14*s.* 1*s.* 10*d.*, which, with the 4*s.* 17*s.* 4*d.* for the eight cashiers, makes altogether 18*s.* 1*s.* 2*d.* expenses incurred by the smelting companies' agents out of a bill for 29*s.* 11*d.* 6*s.* (saying nought about the horse's charge). Without intending to be invidious, it may be well here to particularise the number of representatives each company had at the dinner. Nos. 1, 2, and 7, three each; Nos. 3, 4, 5, and 8, two each, making 19.

Such is the true statement of one ticketing dinner, and how the bill is divided up and charged. The mine adventurers have just cause to complain: they don't they, one and all, unite and do it, rather than keep privately grumbling, and still allow the practice to continue. As to the idea of a "general mart," it is moonshine; they need no better place than the Assembly Room at Truro, the Town Hall at Camborne or Redruth, if they choose to select them, with a cold collation, or something of the sort; but reform the present abuses properly, and the ticketing expenses need never be objected to, or letters written in complaint thereof.—T. T. : *Camborne*, Oct. 21.

#### THE TAMAR SILVER-LEAD MINING COMPANY.

SIR.—The letter of "A Loser," in last Saturday's *Journal*, tells a sad tale respecting the affairs of this company; yet, I fear, a true one. The mines are prosperous, but the smelting otherwise. What is the cause of this? Other smelting firms do well in a commercial point of view; why not the Tamar concern do so too? Something, I fear, is wrong in the practical management, or whence such losses, independent of the "bad debts?" I am of opinion that the smelting works are necessary to the prosperity of the mine, if properly carried out, as it is a security, in a measure, to the obtaining of fair prices for the ore raised.

Seeing matters standing as they do, I would advise that some sound, practical smelting manager be called in to inspect the works and processes carried on at the spot, and report thereon. Let him see if any well-tried improvement can be introduced with advantage, or if any management expenses can be dispensed with on the establishment, so that benefits may arise instead of losses.

London, Oct. 20.

#### ANOTHER LOSER.

SIR.—A Mr. Thomas Fuller sought, a week or two since, to impose this mine upon the public, under the name of "Devon Great Burra Burra," in the hope that the similarity of name would secure it for the notice and attention which the Devon Burra Burra has so eminently obtained. Doubtless, many were deceived by this unscrupulous attempt; but I have the satisfaction of knowing that many more were preserved from the consequences by timely warning. Those who do not read your *Journal* critically would not discover that the various contradictions, which appeared from Mr. E. Hopkins and others, in last week's *Journal*, of the false statements put forth relative to Wheal Surprise, fraudulently called Devon Great Burra Burra, had no reference whatever to the Devon Burra Burra Mine, of which a second perusal will convince them. I need not further trespass upon your columns in reference to this nefarious transaction. A certain corrective for such proceedings, would be to require that every man before he advertise as a broker should become a sworn broker of the City of London. Character and probity are essential qualifications for the practice of such a profession: the bare requirement of proof of the possession of these pre-requisites would effectually exclude from the mining world those whose characters will not bear the strictest investigation.

London, Oct. 24.

THOMAS HARVEY.

[We have felt called upon to make some slight alterations in the letter of Mr. Harvey—more especially as the strictures omitted have reference to matters which never appeared in our *Journal*.]

SILVER VALLEY AND WHEAL BROTHERS—WHEAL LANGFORD.

SIR.—I have observed from time to time several notices of the large discoveries of silver in the Silver Valley and Wheal Brothers Mine. The success of that adventure is now placed beyond a doubt. I have recently visited Cornwall for the purpose of inspecting that mine, and it appears to me that Wheal Langford, adjoining, deserves the particular attention of those who take an interest in mining speculations. The development of the lode of silver gossan is very extraordinary. It exists in a well-defined and continuous lode, from 3 to 4 in. thick, lying upon a wall of stone, which separates it from the main copper lode, 7 feet thick. These two lodes are at this moment laid open for working no less a distance than 300 fms.; and as a superior engine, by Nicholls

and Williams, has just been put to work, in a short time returns of an important character to its adventurers must be made. I brought specimens of the silver gossan to town, broken promiscuously from the lode, and was astonished to find that, although no appearance of silver was evident to the eye, yet, on assay, it produced 87 per cent. of pure silver. On calling at the office, a day or two ago, I found that since the engine had unwatered the workings, they had broken and sent up some beautiful specimens of both silver and copper from parts of the lode they had not before got at; and I hesitate not to say that nothing could be more satisfactory than they are. The copper lode even at the present shallow depth will yield ore that will command a very remunerative price. Several thousand pounds worth of silver was formerly sold from the shallow workings of this mine, and 20 tons of copper ore, which realised 2*s.* per ton. The mine has now arrived at a point to fully develop its resources, and will assuredly yield an ample return to those who are fortunate enough to have held to their investments in it.

City, Oct. 24.

#### TO THE SHAREHOLDERS OF THE ANNOTTO BAY AND LIQUANEA MINING COMPANIES.

As the recent reports from Jamaica justify sanguine expectations from the operations of these companies, the shareholders should now be firm in retaining their shares, and qualify themselves for the ensuing election in January next.—A SHAREHOLDER: *Barbican*, Oct. 24.

#### MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

DEVON BURRA BURRA.—The workings at this mine are being prosecuted with considerable energy. The Gate-post lode still maintains its size and character, and it is expected that the precise spot from which the rich blocks of the grey oxide of copper were taken will be reached in from 10 to 15 fathoms further driving. The large east and west lode, from which fine specimens of yellow sulphur of copper were raised, is daily improving. The adit has now been driven a great many fathoms towards the western cross-course, near which, it is expected, the junction of the two southern lodes takes place, where a large

## Mining Correspondence.

## BRITISH MINES.

**ALFRED CONSOLS.**—We expect the shaftmen will be ready for sinking Field's engine-shaft under the 90 next week. The lode in the 90 east is 4 feet wide, in the middle of which there is a branch 6 in. wide, yielding about 14 tons of rich copper ore per fathom, with every appearance of a rapid improvement; this copper is of the best quality yet raised in these mines. The lode in the 80, east of Wyd's shaft, is 3 ft. wide, worth 30*t.* per fm. for copper ore: this ore is farther east from 8 to 4 fms. beyond any other level. The lode in No. 4 winze, sinking under the 70 fm. level, east of engine-shaft, is quite equal to the last report—viz., 16*t.* per fm. The lode in the 60 fm. level, west of this shaft, is 6 feet wide, and improving in appearance. No change in any other part since my last report.

**BEDFORD UNITED**—In the 115 fm. level, east of engine-shaft, there has been no lode taken down; in the same level, west of Andrew's winze, the lode is from 3 to 4 feet wide, producing good stones of ore. The lode in the 103 fm. level east is 4 ft. wide, worth 4 tons of ore per fm. In Lintern's winze the lode is 3 ft. wide, worth 6 tons per fm. The lode in the 90 fm. level east is without alteration; in Rundle's winze it is worth 4 tons per fathom. We have cut into the lode in the 80 fathom level east about 18 in., and have not yet reached the north wall; it is producing good work, and is kindly.

**BISHOPSTOW (SILVER-LEAD).**—Agreeably with your request, I met the directors of the mines last week, and examined the surface and underground workings. I found that your engine-shaft had been put down opposite to a good course of ore, formed in your principal vein, and which was the object that attracted the old miners, as well as yourselves, to this spot. This deposit of ore appears to be formed upon the junction of a series of layers of limestone upon a crystalline basis, much as is analogously observed in such mining districts as those that bear copper in Cornwall, where good lodes of that metal are found in places where the clay-slate rests upon the granite; and it is probably owing to this arrangement of the strata that the veins are filled with metal in each case. It would appear, from the line of dip of the measures, that the hard limestone rises to the surface to the north of your mine, and dips under the sea to the southward, and that your deposit of ore is formed in a line, bearing a limited and relative distance to the southern face of the hard rock. It appears to me, that this was the cause of the discovery of the lead in the first place; the bearing strata, running close to the sea shore and enclosing the vein, was laid open by the action of the tides, and the site of the lead was thus made evident; it would seem that the formation of ore continues to traverse these beds for a considerable distance—say, from the engine-shaft to low water mark, but that it does not hold into the rock immediately contiguous to the hard limestone, but much farther than your levels have traversed to the southward. In making their trials, the old men took up an adit level as low as they could for the tides, and continued it northward until they could enter the best portion of the lode yet worked, which was opposite to your present engine-shaft. I am of opinion that this ore ground came to the surface some 20 to 30 fms. to the north of your engine-shaft; and from its dip, that it will again be found, by your 20 fm. level, to the southward of your present forebore. From the impossibility of obtaining a correct section of the face of the hard limestone to the southward, and from the probability that its line will be marked by no peculiar regularity, I cannot with certainty predict the distance that your different levels would have to be driven from the engine-shaft to intersect the body of ore. However, from the dip of the beds, I think its line cannot, at the 20, be above 70 to 80 fms. from the engine-shaft; and I have no hesitation in recommending the continuance of this level of trial to that extent; and, whatever may be the result, I should hardly be satisfied with the portion of the lode that is seen to bear ore below the high water mark is fairly driven under. The trials now remaining to be made, in developing the mine, are of a much lighter character, with regard to expenditure, than those you have had to contend with. The cost of your levels in the vein is not above 6*t.* to 7*t.* per fm., inclusive of your engine cost, a sum less than is paid for driving adits in the clay-slate districts, and which is considered the least expensive of all forms of mining; your levels are also moving rapidly, desideratum of great value in mining. I think you ought to be able to accomplish the driving of the level into the ore ground, or where the course of ore may naturally be looked for, in six months from this time; and I think, with every trial, such as the cross-cutting of the lodes to the east and west of your main lode, this will be done for little more than 10*t.* per month. The circumstances that bear out my making this recommendation to you are, the rich character of the remnants of the contents of your lode, as now seen in the 10 fm. level; the continuation of such a lode as this, I am satisfied, would leave you considerable profits; as the vein, containing 8 to 10 cwt. of lead ore, might be taken away for 20*t.* per fathom; and, from the quantity of carbonate of lead found in the upper section of the lode, I am convinced that a good body of galena exists at no great depth below it, which ought to be discovered by the 20 fm. level, if continued southward. In driving the eastern cross-cut from the adit level, a small lode of lead ore and carbonate of lime, has just been met with, which looks like a leader to a good lode of ore; it is well-defined, about 4 in. wide, filled with ore of a very solid character; and, although it will not now leave a profit for working, I consider it well worth opening upon; but I should first recommend the continuation of the adit eastward, into a series of joints and veins that contain ore at the surface, and which seem to have a tendency to join together and form stronger recrystallized for the ore below: this trial will be included in the cost referred to, and be carried on at the same time. I would add, in conclusion, that it is a matter of great encouragement to the company, that the old miners' works were found in such good ore, from which you obtained a great many tons in a short period, and which, I think, establishes the fact, that the limestones of this district contain bodies of ore, as they do in the Flintshire and other carboniferous fields; and that capital, well invested, will, ere long, establish the truth of there being good lead mines in the limestone formation in which you are making your trials, and I have confidence that you will succeed in following the body of ore discovered in Bishopstow to the profit of the proprietors.

**BLACK CRAIG.**—This mine is producing a very fair quantity of ore. The 40 fm. level drivings, east and west, are very promising; the lode is very large, and well sprinkled with ore. Three pitchées in the slopes below the 25 fm. level continue to produce the average quantity as we go down. In the backs above the 25 fm. level we have little or no alteration to notice. One of the four pitchées in the 7 fathom level has improved a little. We have a cargo of ore waiting a vessel, and another cargo partly dressed, which will be ready for shipment in a few days. We have also a large quantity of ore broken in the mine.

**BRYN-ARIAN.**—The engine-shaft sinking under the 24 fathom level is still favourable for sinking. The 20 fm. level driving west of the engine-shaft is in a lode 5*t.* wide, but still disordered, and at present rather poor; the slope in the back of this level, west of the shaft, will produce 10 cwt. of ore per fathom; the slope in the back of this level, west of Hughes's winze, is in a lode 10 ft. wide, yielding 1 ton of ore per fm. The lode in Hallett's engine-shaft is 5 ft. wide, producing 12 cwt. of ore per fathom. The lode in the 20 fm. level driving north is 5 ft. wide, with a slight mixture of ore, but not of much value at present; the lode in the rise in the back of this level will yield 15 cwt. of ore per fm.

**BUTTERDON.**—The lift is all completed from the 30 to the 40 fm. level, and works satisfactorily; a balance-bob is also fixed from the surface, from which we derive a considerable benefit, to the engine. We shall now be enabled to continue the sinking of the shaft regularly, and if the ground should continue as at present, we may expect to get deep enough for another level in about eight weeks. In the 41 fm. level the lode in the south end maintains its size and kind of appearance, with a little more lead than last week; in the north end the lode is larger, with just the same promising appearance. We cannot progress with the winzes in consequence of water.

**CALLINGTON.**—The lode in the 135 fathom level, north of the diagonal shaft, is 14 in. wide, producing 2 cwt. of lead per fm.; the lode in the south end of the same shaft is 12 in. wide, composed of soft white quartz, prian, and stones of lead—saving work. The lode in the 125 fm. level, north of north mine, is 10 in. wide, producing 2*t.* cwt. of lead per fm.; the lode in the south end of this level is 11 in. wide, composed of white iron, spar, prian, and lead bespangled throughout. The lode in the 125, north of south mine, is 15 in. wide, producing 2 cwt. of lead per fm.; the lode in the south end in this level will produce 3 cwt. of lead per fm. The lode in the 112 fm. level south has not been taken down since last reported; on the wall of it laid open is smooth and hard, which is kindly for lead. The lode in Kelly Bray rises, over the 70 fm. level, is much the same as it has been for some time past, but the ground is easel. The slopes in the eastern end of the rise will produce 3 tons of copper ore per fathom. The ground in Kelly Bray shaft, sinking below the 50 fm. level, is rather hard at present, and the lode split into branches. I think, on the whole, the tribute department is improved. Yesterday (Oct. 20) we supplied a pail of lead ore, computed 45 tons, to be tendered for as usual.

**CASTLE DINAS.**—We have got through the runner in the adit, and have been on, and have seen the east and west and Domsey's lodes, together with several fine branches; they are fine lodes as can be seen, from 3 to 4 ft. big. The adit is so bad in the end of the adit that nothing can be done till we sink a shaft; this we shall do immediately, it can be done for a trifling expense, and in a short time. The shaft will come just in the middle of the valley about 20 fms. from the great lode, and will be sunk on the east and west lode. The open level for carrying away the fall water of the wheel is progressing well—we are now up about 140 fms.; this level will be of essential service in draining the ground all around. In the case of the tuckwork hatching lode, I think we can count upon it without difficulty, in consequence of the drainage afforded by this level. The water-wheel is nearly ready to be sent up to the mine for erection; we have to send it there the end of next week, or the beginning of the week after. An 8-inch pump is preparing to be put into the shaft on Brewer's lode; the water-wheel will work this by means of flat-rods. By the middle of next month we hope to have the water in work in Brewer's shaft, when we shall at once commence raising tin from that lode. The stamp axle is cast, and the timber work in a forward state; the stamp axle itself will be ready by the time we want them. There is plenty of water for driving the wheel and dressing the tin. A carpenter and smiths' shop, with store house and yard, will be put in hand immediately; this is absolutely necessary, for materials are now open to the weather and depreciation.—J. D. BAXTON: Oct. 18.

**COCKLEY BECK.**—The ground has become soft, and much easier to drive; we can now advance 2 fms. per week. We last week made 2 fms. in the deep adit, and the more I see of the lode, the more I like it. From the present character of the lode, I am sure there must be a great deposit of copper in this mine. Last week we found some fine stones of copper, that will make a product of 25 per cent. I have taken out 4 cwt. of such stones. I am in great hopes of this lode as it gets more settled; it is 14 ft. wide.

**COPPER BOTTOM.**—In the rise in the back of the 80 fathom level, west of Paul's shaft, we have a kindly lode, producing some ore. In the winze sinking in the bottom of the 20 fm. level, west of Paul's shaft, we have a good ore lode, 3 ft. wide, improving in depth. We have had no alteration in the rise in the back of the 20 fm. level since last reported. We have commenced sinking Highburrrow shaft. I shall be able to say more about the lode in my next report; we cannot expect to meet with much ore in this shaft until we get deeper. We shall certainly have a productive lode in this part of the mine at a greater depth. In the 20 fathom level, driving west of Gandal's shaft, we have a promising lode, 1 ft. wide—improved since last reported. In the winze sinking in the bottom of the 10 fathom level, west of Gandal's shaft, we have a very kindly lode, completed in three weeks, and shall then commence fixing the pit work in it. The ground is being cut for the dam in the 10 fathom level; this dam will be finished in a fortnight. The surface work is progressing satisfactorily.

**CRAIG-Y-MWYN (LEAD).**—I have again accurately dialled this mine, paying to my compeers satisfaction the correctness of the plan previously handed in. The north cross-cut, to connect the whole mine and four main lodes by a large working level, proceeds but slowly, averaging for six months 3 ft. 6 in. per week; the rock has been bad, but not now so, so we may expect more rapid progress for the 36 yards which will require to be driven to cut the main lode, supposing the dip of the lode should continue at the same angle (namely, 45 deg.) as it does now; it must proceed in the depth will dip more, giving less distance to drive. The large parallel vein intersected from the north vein is now closing in with the north vein, and, most probably, will at a short depth form one large lode, about 4 ft. wide. The course of ore on this visit, reported in August, seems to go down, and to the west, but in much diminished bulk, worth now from 10 to 15 cwt. per fm. As this lode becomes more settled in the depth, I more confidently rely upon finding it right at the point where the north cross-cut will cut it.

Nothing farther can be done in the sump in No. 3, on the north lode, where the over-lucker reports the ore solid, 12 in. wide, going to the west; this can only be beneficially worked when the mine is further opened. The Sun vein has been driven upon 6 yards since its intersection from No. 4, looking poor.

**CWMYSTWITH.**—A fine bunch of ore has been cut in Penyeilen 10 fm. level west of shaft; it has been driven into 3 ft., and will yield 2 tons per fathom; in the east end there are some strings of ore, but the ground is loose, and full of large vagras. There is some ore in the sink at Kingsdale, where the adit is expected to be communicated soon, but the ground is hard. On Pugh's side the mine is poor, and will be worked on tribute.

**DEVON AND COURtenay.**—We are now through the elvan course in Carthew's shaft, and shall be entirely clear of it by Thursday. There is no alteration in the ground in Rendle's shaft since my last report. The 70 fm. cross-cut is a little easier for driving, and still containing strings of ore. The 60 end is for the present poor. The slopes in the back are worth 10*t.* per fm.

**EAST BALLESWIDDEN.**—In the 10 fm. level, west from Rose engine-shaft, we have a lode 2 ft. wide, with stones of tin. In the 8 fm. level, east from the flat rod engine-shaft, we have a good branch of rich tin. We have cut the Rose lode with stones of tin; in the adit level west, on this lode, we have a good-looking tin lode.

**EAST CROWNDALE.**—In the 58 west, on the south lode, we have bad air, and are putting down pipe, and have applied a fall of water from the surface, to enable the men to work; in the 58 west, on the north lode, ground hard and the lode small; the 40 fm. level, to drive west, stabled 6 fm., or the month out, at 2*t.* 15*t.* per fathom. The shaft will complete cutting bob plat by the time stated in my last.

**EAST SHARP TOR.**—Last Saturday, being setting day, the following bargains were set:—The cross-cut to drive south, stabled 3 ft., or cut through the lode, at 14*t.* per fm. No alteration in the character of the lode since last reported. The 40 fm. level, to drive west, stabled 6 fm., or the month out, at 2*t.* 15*t.* per fathom. The shaft will complete cutting bob plat by the time stated in my last.

**EAST WHEAL GEORGE.**—The ground in the shaft is the same as last reported. The lode in the 23 east is now south by the cross-course; west, we have a long piece of the south part of the lode standing. We have put two men to cut in, and as far as they have gone the lode looks well for making ore in depth; the principal part of the shaft is spar, with mundic and good spots of ore. The lode in the stope is yielding about 14 tons per fathom.

**EAST WHEAL JOSIAH.**—The adit level is still being driven south on the course of the lead lode, which maintains a good size (4 feet wide), and is composed of gossan, flookan, quartz, and prian, with occasional stones of lead,—altogether promising.

**EAST WHEAL LEISURE.**—About 5 fathoms have been driven on the lode in the 38 fm. level; east it is 1*t.* wide, soft spar, mundic, and good stones of ore, promising, and in favourable ground; westward the lode is split. The lode in the 27 fm. level east is 2*t.* wide, with a little ore. The 17 west, in the end of Morcom's shaft, is 3*t.* wide, with some ore, and promising; the 17 fm. level east is producing a ton per fm., and kindly. The 10 west, on Taylor's lode, is not yet clear from the cross-course, but produces good work for ore; this level has laid open 30 fms. of good tribute ground, on which there are two pitchées working at 5*t.* in. The winze from the adit is held to the 10 fathom level east, and another winze set to sink in this level, to prove the lode under the large run of mundic seen here. The end of the 10 east is composed of mundic and spar, spotted with ore. Nine tribute pitchées are working, varying from 5*t.* to 11*t.* per fm.

**EAST WHEAL REEETH.**—Oct. 15.—We have cut the lode in the 24 fm. south, and find it to be from 1*t.* to 2 feet wide. I have taken a sample of the lode, which the dresser of Wheal Reeth has tried on the shovel, and thinks it to be worth from 4*t.* to 5*t.* per barrow: he says it is worth more than the present average of Wheal Reeth tin, and it is the same nature of lode, which they have in Wheal Reeth; I think it is going in the east side of the lode. Everything appears to be going on well.

Oct. 21.—The lode is full 2 feet wide, and better in quality than when it was first cut into. The 24 fm. level, going north, is also producing some good tribute work. We must attach a stamp to the engine as soon as possible, and get the tin into the market. I will write you more fully after seeing the lode to-morrow.

**EAST WHEAL RUSSELL.**—The lode in the tunnel level end, going west, is much improved in appearance since my last report; it is now from 5 to 6 ft. wide, composed of peach, mundic, prian, sugar-spar, greens of copper, and stones of ore; altogether a splendid looking lode, and showing strong indications of a course of ore. The winze in the bottom of this level is stopped, owing to water, but we have commenced a rise in the back, from which the men are breaking some good work; a stone of ore brought from there this afternoon weighed 122 lbs. The fixing of the engine is going on satisfactorily, and which I hope will be at work in about three weeks or a month.

**ESGAIR LLEE.**—The sumpines are still cutting plat in the 10 fm. level. The caunter lode in the deep adit, east of Jones's winze, is poor. The lode in the tributary pitch is the same as last reported.

**GREAT BRYN CONSOLS.**—The ground in the deep adit level is more soft than on setting-day, the 4th inst.; although the setting price was only 2*t.*, it occasionally requires some timber—the ground is very congenial for mineral; this level is progressing nearly south at present, at the rate of 15 fms. per month; consequently a few months will make much discovery in developing the lodes which it may intersect; the exact distance to intersect the lodes that have been seen aforesince cannot be ascertained, costing being very bad to perform; this level was taken up by a former company, the open cutting and close driving being about 200 fms., two adit shafts sunk, and another since by the present company, which is nearly 10 fms. deep: in the former and latter driving several lodes and branches have been intersected of a very promising character, some of which have produced good copper ore. These lodes cannot be brought on to advantage unless the mine be deepened; this hereafter must be done by steam-power, but until the remaining lodes are intersected the position for an engine cannot be properly ascertained. There is water in winter to drive a wheel, by which means a level will be sunk on 20 or 30 fms. A cross-cut has been driven north about 55 fms.; 3*t.* fms. from its commencement it has intersected a slide, 4 feet wide; and 5 fms. north of the slide a lode has been intersected, from 2 to 3 feet wide—a soft and kindly lode, composed of peach, flookan, and gossan, very kindly for copper; at the extreme point of the driving another lode has been intersected, 3*t.* wide, composed of quartz, mundic, and spots of yellow copper ore. It will be advisable to continue the cross-cut further north, as more lodes may be discovered, which if driven on east will increase in depth; the ground in the cross-cut is easy for driving. We have opened the shallow adit, which has been driven in former workings 159 fms.; besides many fathoms of open cutting, two shafts have been sunk on this level—the extreme point being 74 fms. from the southernmost shaft; several branches have been discovered in this driving, but not well-defined: 25 fms. south of this end is an elvan course, and from what can be discovered from the former adit workings south, more lodes are likely to be met with; but the level cannot be continued long without a shaft, which will be about 12 fathoms to sink; the ground throughout has been easy for driving. We have begun to open an old level in Earl Falmouth's land (Little Bryn), which adjoins Great Bryn; it has been affirmed by persons not connected with the mine that there are two lodes discovered in this department, containing tin and copper ore. Taking into consideration the number of lodes and branches that have been discovered, and what remains to be discovered, the soft and kind strata throughout the operations, it also being near the granite, and having two elvan courses within the distance of about 200 fms. within which is the principal part of the workings, we consider the mine holds out superior advantages.

**GREAT WHEAL BADDERN.**—The 30 and 40 fm. levels have considerably improved for lead during the last fortnight. The other sections of the mine are much the same as last reported. The general operations of the mine are going on well, and with spirit. We shall be ready with the usual quantity of lead for sampling on Saturday. The mine altogether presents very good prospects, and promises to continue

improving for a long time to come. We have made a trial of the 40 fm. level end.

**HENNOCK.**—The lode in the 20 fm. level north is now worth from 12*t.* to 15*t.* per fm.; the part of the lode containing the lead is about 2 feet wide, to the east of the great quartzose lode. There is a decided change in the western lode—much softer, with a very rich looking gossan. We commence operations in the 30 fm. level to-morrow in the 21st inst., but we have several fathoms to drive to meet the lead ground down since the bottom of the 20, although the lead is dipping towards the engine-shaft.

**HINGSTON DOWN.**—In consequence of the breakage last week, nothing has been done in the 65 fm. level. The 45, on the north lode, is much improved, worth 2 tons of rich quality ore per fm. The slopes in the back of the 35 fm. level yields good supplies of ore. Last evening (Oct. 21) we received our earnings, and no time is being lost to get the engine, and everything connected therewith, ready, so as to be able to improve the working of the mine.

**HOLMBUSH.**—We have completed the plunger-lift in the 132 fm. level, at Hitchins's shaft, which works remarkably well. The lode in the winze below, on the north part, 20 fms. east of the cross-course, will produce 3 tons of copper ore per fm.; eastward of said winze the end will produce 3 tons of ore per fm. The lode in the 132, north and south, is 10 ft. wide, composed of quartz, prian, flookan, and stones of lead. The lode in the pitchées in the back, on copper, has not been taken down since last reported. The flap-jack lode in the 120, east of great cross-course, is 15 in. wide, producing 2 tons of copper ore per fm. In the 110 east the lode is 20 ft. wide, composed of spar, mundic, and stones of ore, and from its appearance, is very likely to improve shortly. The lode in the 100 fm. level, west of Wall's, is 3*t.* wide, producing stones of ore. The ground in Wall's engine-shaft is very much improved, having got through the ironstone floor, and it is now in a beautiful light blue killas.

**KESWICK.**—At Brandley, the 20 fathom level south is not looking quite so well; the same level north is worth 25 cwt., and Kelley's rise 15 cwt. of lead ore per fm.



**SILVER MINES—AL FIN HALLADA.**—In the winze sinking in the bottom, the lode is 3 to 4 ft. wide, composed of quartz, interspaced with white silver throughout; I never saw a more metallic lode than this. In the 30th south the lode is large, with white silver intermixed. Two winzes are being sunk, from each of which some good ore is being raised. In the 15 south the lode is 2 ft. wide, average quality ore—say, 200 mares per cwt. The new shaft is communicated to the 30, and affords great facilities for drawing away the stuff.

**SAN JOSÉ DEL CARMEN.**—In the cross-cut south we have intersected a pretty looking branch, 6 in. wide, giving a trace of silver, which we consider very encouraging. With the level driving north-east on the Manto I am much pleased, it being very metallic indeed; in it, is everything but a bunch of silver, being composed of quartz, pebble, and crystallised spar. As we proceed, we are becoming nearer to where the rich deposit was found upon the surface.

**MERCEDITAS.**—The lode in the 25, east of shaft, is 20 in. wide, very metallic, embedded in beautiful strata; west, it is 1 ft. wide, very metallic.

**CARMEN ALTO.**—We have commenced sinking a winze below the bottom level, where the lode is 6 in. wide, a little quartz, encased in a pretty channel of ground.

**SANTA ANA.**—The winze under the 30 is down 2 fms., lode from 9 in. to 1 ft. wide, composed of quartz and white silver, with a rich deposit of arsenical and ruby silver embedded therein. The lode in the bottom winze has considerably improved. My opinion of this mine is not in the least altered; the further we open the ground the better are the prospects. We have now in the ranches about 4 tons of ore, which will be ready for the troop by the 30th inst.

**COLORADA.**—Nothing new. The lode in the bottom is still very large, and giving occasional stones of arsenical ore. In the level north we have a lode 3 ft. wide, producing some beautiful stones of low ley arsenical ore. The lode now being sunk on the north is looking remarkably well, being 9 in. wide, composed of quartz, showing an edge of silver.

**GOLD MINE—DESCUBRIDORA DE ORO.**—In the level north we raise a little low quality ore. The water from the mine for the troop is invaluable.

In conclusion, allow me to say that, although in the present month we have not done so much work as we could have desired, owing to the prevailing sickness, yet I am glad to say that at the present moment it appears to have left us, and we hope in the ensuing month again to move on in our usual way.

**LINARES MINES.**—The following has been received from Mr. H. Thomas:

*Linares, Oct. 11.—The shaftmen, blacksmith, carpenter, &c., are busy in the work belonging to the change of pitwork, which I hope to see completed in a few days, and with little hindrance to the regular working of the mine. The 55 fm. level, driving west of Wilson's shaft, is a little more kindly than last reported, and produces about 1 ton of ore per fm. There are 14 or 15 fms. to drive further west before this level will be under the good ore ground now working in the bottom of the 45, near San Juan shaft. I expect also that we shall meet with some good paying ground before the distance is driven. The stopes east in this level are hard, and worth from 3 to 4 tons per fm. The 45 fm. level, driving west of San Juan shaft, is somewhat harder, and still without ore. In the same level, driving east of Shaw's shaft, the lode is worth 3 tons in a fm. The 31 fm. level, east of Shaw's shaft, is, without alteration. A little behind this end we have men engaged in cutting a winze plat, preparatory to sinking a winze to the 45 fm. level, with the object of driving to meet that level, and thus open the mine more rapidly. The men in Shaw's shaft are opening a plat in the 55, without anything new to notice in the character of the ground. San Juan shaft has not been taken at the setting price of 500 reals per varas. Thomas's shaft is being proceeded with regularly, and will be most advantageously situated for developing the eastern part of the mine.*

**Stock Account.**—Lead ore weighed in Oct. 11, 57 tons 10 cwt.; total in stock, 208 tons 16 cwt.—Pig-lead smelted in week ending Oct. 11, 25 tons: total in stock, 472 tons.

**ROYAL SANTIAGO MINING COMPANY.**—

*Cobre, Sept. 16.—We expect to raise about 80 tons in this month. The 10 fm. end remains without alteration—a large promising lode, but without any ore worth saving. In a few days we shall commence a winze where we had a bunch of ore mentioned on the 6th inst. In the winze sinking under the 15 fathom level the lode is 5 ft. wide, yielding 5 tons of excellent ore per fm. This winze (now within 2 fathoms of the 22 fm. level) is 9 fms. west of Taylor's shaft. The 22 fm. level has been driven 9 ft., further west than this winze, and from the slide having a more southerly course than the lode, the position of the level, from being 3 fms. to the north, is now as far south as the winze. We have had lately bunches of ore in the slide, and now have 2 ft. wide of yellow ore, on the south side of the end, and several feet of friable quartz, mastic, and stones of ore to the north.*

*Sept. 24.—Since the 16th inst. very little alteration has taken place in the mine. In the 22 fm. level the lode is still in connection with the slide, which has been running horizontally in the past week: the ore part, giving about 3 tons to the fm., is formed upon the slide, north of where the lode is cut off. The winze sunk from the 18 fm. level has been holed to the 22. The lode remained unaltered, until it touched the slide in the back of the 22 fm. level. We have now commenced stoning the lode to the east and west of this winze. Taylor's shaft has been planed to the 22 fm. level. A plat is nearly completed, and the sinking will recommence the latter part of this week. The 10 fm. level has been stopped for a few days, in order to communicate the winze sinking from the adit, which is much wanted for ventilation. We are still obliged to drive the mules very hard to keep the water under the 22 fm. level. The late alteration of the pitwork, however, lessened the weight, and we appear to be slowly mastering it. The water is now 15 ft. under the above level. Thompson's engine-shaft has been recommenced this week by day, and as soon as mules can be spared, it will be kept on as well by night; also New Isabella shaft.*

**SUBMARINE TELEGRAPH.**—Considerable interest having been excited on the subject of this experiment, we have much satisfaction in stating that all difficulties of an official nature having been obviated, there is every reason to believe that the communication between the two countries will very shortly be in operation. Some gentlemen present at the Bureau des Telegraphes, in Paris, on Thursday morning (Oct. 23), in company with M. Fay, the director-in-chief, and other gentlemen connected with the undertaking in question, requested that a message might be sent to the South Foreland Lighthouse, near Dover, to inquire if Mr. C. was still waiting there; and the answer—"that Mr. C. was on his way to London," reached him in less than one minute and a half after the message had been dispatched from Paris.

**METALLIFEROUS PRODUCTION OF ROCKS.**—In Derbyshire the metalliferous limestone is interstratified by seams of hornblende, called toadstone. The latter rock is considered by the plutonists to be lava injected in a molten state into the joints of the beds. These seams are composed of hornblende, felspar, and oxide of iron, and, although generally hard, are frequently found in many parts as soft as clay; and this substance is gradually and imperceptibly permeating and swelling between the seams of limestone, like silicious veins in a moist state, but much more active than the latter, and consequently tend to disturb and dislocate the uniformity of the series. When a vein of lead is worked through the first limestone down to the hornblende seam (toadstone), the ore is, as it were, cut off; but on sinking through this seam to another bed of limestone the lead ore is found again, until it is cut off by a lower bed of toadstone, under which it appears again in the third limestone. Generally speaking, the upper part of the mountain limestone series is the most productive in the north of England, and within that portion there are certain beds much more productive in lead ores than others. The ore is not only found in the fissures of the above limestone, but also in immense isolated masses in the middle of certain beds. Large quantities of lead ore and calamine are found in such positions on the Continent, as well as in England, and the hematite iron ore of Ulverstone is similarly formed. The metalliferous solvents necessarily accumulate in joints, fractures, horizontal or vertical, and in all cavities, especially in the producing rock; we may, therefore, well conceive the various characters of such mineral aggregation. Sometimes the lead ore will ooze out of the limestone into the millstone grit, and there crystallise in masses in the direction of certain joints of the structure below, as at Mold, in Flintshire. Similar masses, called tumblers, are also formed in the same manner on the back of metalliferous clay-slates in Wales and Devon. Indeed, the metalliferous productions of rocks are so various, and governed so much by local physical conditions, as to render it too laborious to enter into details.—From Mr. Hopkins's forthcoming work, on *Terrestrial Magnetism*.

### New Patents.

#### LIST OF PATENTS GRANTED DURING THE PAST WEEK.

H. Roberts, Manchester, for improvements in machinery or apparatus for regulating and measuring the flow of fluids, also for pumping, forcing, agitating, and evaporating fluids, and for obtaining motive power from fluids.

E. Hallum, Stockport, Chester, for certain improvements in preparing and spinning cotton and other fibrous substances.

J. Ramsbottom, New Mills, Derby, for certain improvements in machinery or apparatus for measuring and registering the flow of water and other fluids or vapours, which machinery or apparatus is also applicable to registering the speed of and distance run by vessels in motion, and for obtaining motive power and other similar purposes.

J. Beattie, Lawn-Place, South Lambeth, Surrey, for improvements in the construction of railways, in locomotive engines, and other carriages to be used thereon, and in the machinery by which some of the improvements are effected.

W. Boggett, St. Martin's-lane; and G. H. Palmer, Westbourne-villas, Paddington, for improvements in obtaining and applying heat and light.

J. Platt, and C. Schiele, both of Oldham, Lancaster, for certain improvements in machinery or apparatus for the preparation and manufacture of fibrous materials, which improvements, or parts thereof, are also applicable for the transmission of fluids and uniform bodies.

D. Henderson, Glasgow, for an improved apparatus for generating gas, which apparatus may be used for heating and other similar useful purposes, and other apparatus for heating and ventilating.

J. H. Pape, Paris, France, for improvements in ploughs.

J. Sparka, Conduit-street, Bond-street, for improvements in or substitutes for laced stockings, or bandages for the legs.

H. Adcock, Northumberland-street, Strand, for improvements in the manufacture of pipes, chimney pots, and hollow vessels; also bricks, tiles, coping, columns, and other articles used in buildings houses and other structures.

A. Searle, Tanybwlch, Merioneth, for improvements in sawing machinery.

M. Poole, of the Patent Bill-office, London, for improvements in axle-boxes for railway carriages.

#### DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

W. Walker, East Bridgford, winnowing and dressing machine.—Holliday and Clemons, Watling-street, royal shawl mantie.—J. H. Beaumont, Oxford-street, boot upper-leather.—W. L. Gilpin, Manchester-street, screw capsule for bottles, jars, &c.—Chubb and Son, St. Paul's Church-yard, lock.—Charles Hart, Wantage, skim plough.—Mechanics' Magazine.

#### GOAL MARKET, LONDON.

**MONDAY.**—Ships at market, 234; sold, 135.

**WEDNESDAY.**—Ships at market, 156; sold, 101.

**FRIDAY.**—Ships at market, 117; sold, 79.

### Current Prices of Metals, Stocks, & Shares.

#### METAL MARKET, London, October 24, 1851.

ENGLISH IRON, &c.		per ton.	ENGLISH LEAD, &c.	
Bar, bolt, & square, London	45	8-8 7 6	Tile	287 10 0
Nail rods	6	0-0 3 6	Old copper	per lb. 5 4d.
Hoops	7	0-0 7 5	Yellow Metal Sheathing	per ft. 5d.
Sheets (ingles)	7	12 6-7 17 6	Westerstedt's Pat. Metal	per lb. 1 11 0
Bars, at Cardiff & Newport	4	7 6-4 10	FOREIGN COPPER.	
Refined metal, Wales*	3	0-0 3 6	South American, in bond	77 0-87 0
Do. antarctic*	3	10 0	ENGLISH LEAD, &c.	
Pigs in Wales	3	0 0	Pig	per ton 17 0 0
Do. do. forged	3	5 0-2 10	Sheets	19 0 0
Do. No. 1, Clyde	19	6-2 10	Pipe	19 0 0
Blewitt's Patent Refined Iron for bars, rails, &c., free on board at Newport	3	10 0	Red lead	19 0 0
Do. do. for tin-plates, boiler plates, &c., ditto	3	10 0	White ditto	24 0 0
Stirling's Patent in Glasgow	2	15 0	Patent shot	20 0 0
Toughened Pigs in Wales	3	10-8 15	FOREIGN LEAD, &c.	
Staffordshire bars at the works	5	5-10	Spanish, in bond	16 5 0
Rails	3	10 0	ENGLISH TIN, &c.	
Chairs (Clyde)	4	0 0	Block	4 4 0
FOREIGN IRON, &c.			Bar	4 4 0
Swedish	11	10 0	Refined	4 10 0
OCND	17	10 0	FOREIGN TIN, &c.	
PSI	—	—	Banca, H. C.	3 19 0
Gonrief	—	—	Straits	3 19 0
Indian Charcoal Pigs in London	5	10 0	TIN-PLATES, &c.	
FOREIGN STEEL, &c.			IC Coke	1 3 6
Swedish keg	15	0 0	IC Charcoal	1 8 6
Ditto faggot	15	0 0	IX ditto	1 14 6
ENGLISH COPPER, &c.			PILES, &c.	
Plates, warehoused	14	0-14 5	Plates, warehoused	per ton 14 0-14 5
Sheets, sheathing, & bolts, p. lb.	0	0 10	Ditto, to arrive	14 0 0
Tough cake	per ton	88 10 0	ENGLISH, &c.	
			English sheet	per ton 21 0 0
			QUICKSILVER, &c.	per lb. 3s 5d
				£. Dis. for cash in 14 days, 10 per cent.

*Terms.—a, 6 months, or 2 1/2 per cent. dis.; b, ditto; c, ditto, 6 months, or 3 per cent. dis.; e, 6 months, or 2 1/2 per cent. dis.; f, ditto; g, ditto; h, ditto; i, ditto; k, net cash; l, 6 months, or 3 p. c. dis.; m, net cash; n, 3 months, or 1 1/2 p. c. dis.; o, ditto, 12 dis.; \* Cold-blast, free on board in Wales.*

*WELSH BAR-IRON is in moderate request—not any raff transactions have transpired.*

*STAFFORDSHIRE IRON is in fair demand.*

*SCOTCH PLATE is in demand.*

*BRITISH TIN.*—A small export business is doing in common—refined in good request.

*FOREIGN IRON.*—Some parcels of Banca have changed hands at 79s.

*SPELTER.*—Not a transaction has been reported.

*LEAD.*—Is without variation this week.

*TIN-PLATES.*—A good business doing.

*GLASGOW, Oct. 22.—A considerable quantity of iron was thrown upon the market for sale, belonging to some of the houses recently failed in other trades, which was immediately purchased by founders and dealers at a trifling below the market price, and quotations are now rather higher than last week. The makers' stocks being much reduced, they decline to sell, and, as the trade is in a very sound and healthy position, they are looking forward to better prices in spring.*

*Mixed Nos., good brands, free on board here* ..... 39s. 6d. per ton, net cash.

*No. 1* ..... 40 0

*No. 1, Gartsherrie* ..... 41 6

*Bars are firm, but no alteration in price.*

**MINES.**—We have to report a very satisfactory amount of business in the market this week, with much more evenness in respect of the shares operated in. In the heavy dividend stocks a considerable amount of transactions may be recorded, at prices rather in favour of buyers; several mines of this class, and paying high rates of interest, are in much favour. In some speculative mines there has also been a good business, and much enquiry for others, especially those of fair repute in the Tavistock and Tamar districts; but we must add that the *furor* which existed a few weeks since for shares in certain new "sets" in the above localities (which it may be unnecessary more particularly to designate) has quite subsided, and the concerns themselves have, in the estimation of the market, descended quite to the bottom of the scale. In the middle-class mines a gradual improvement is developing itself, which we hail as a discriminatory symptom on the part of buyers, there being no description of mining property less appreciated generally than that undergoing the struggle of overcoming a long series of calls, nor any in which the chances of gain to the capitalist is so great—a judicious selection of the adventure, however, being an understood element towards its successful issue.

**In the Metal Market.**—Copper is in request, and firm in price.—Lead is very flat, but little doing.—Tin is a shade better, both English and Foreign.—In Spelter no transactions are reported: prices nominal.

**In the Bullion Market.**—Mexican and South American dollars, buyers at 4s. 10d. per oz. Spanish pillar dollars, 5s. per oz. United States dollars, 4s. 10d. per oz. Bar silver containing gold, all gold above 5 grains in the pound to be paid for, 5s. 0d. per oz. standard. Bar silver without gold, 5s. 0d. per oz. standard. Bar gold, 77s. 9d. per oz. standard. Spanish doubleons, 79s. per oz.; Columbian doubleons, 78s. per oz.

The sale of copper ore at Thursday's Ticketing was 3546 tons, amounting to 22,587. 3s. 6d., the average produce and standard being 94.

At Merllyn Mine, the engine-house is completing with all possible speed, and the prospects are very encouraging as the lodes open deeper.

At the South of Scotland Mine the machinery has effectually drained the mine to bottom, so as to enable them to sink the south shaft.

At Wheal St. Agnes they are raising some very rich work for tin near the cross-course upon Gripe's lode. All the lodes in that district usually prove productive at a short distance from the various cross-courses, consequently the adventurers have every reason to believe that on opening more ground on the lodes they will, at an early day, receive ample recompence for their outlay.

At Bodmin Consols call of 17 per share has been made.

At North Bassett Mine, the lode in the 82 fm. level west, for the last 15 fathoms driving, has yielded copper ore equal to 40L per fm.; the level over, for 12 fms., has been equal to 30L per fm.; the pitches in the backs are looking exceedingly well, and producing the best ores—one of them as low as 1s. 6d. in 17. The 62 fm. level has been extended the furthest west by at least 12 fms., and the appearances in the end are such as to induce them to believe they have another course of ore ahead. The 52 is passing through disordered ground. They have ready for sale 183 tons of copper ore, estimated worth 1200L. The discoveries during the last two months have considerably exceeded the quantity of ore raised to the surface; the available ore ground is monthly increasing. Altogether, the underground prospects were never more flattering than at present.

At Caradon Wood, the water-wheel will be ready to work at the end of next week. The surface operations are nearly completed, and the sinking of the engine-shaft will be resumed with vigour. This mine is held in high estimation by the practical men of the district.

At Bishopstone Silver-Lead Mine, it will be seen by the explanatory report of Capt. Matthew Francis that the cost of driving levels is almost unprecedentedly low; the progress is, therefore, rapidly made, which is a great advantage in mining pursuits. In the 20, great expectations are formed of the lode proving productive within six months. The limestone seems to contain rich bodies or bunches of ore, similar to the Flintshire and other carboniferous beds. They have lately found some good lead in the 32 fm. level, in a lode 3 ft. wide.

At Great Bryn Consols, the ground in the deep adit level has improved in softness; the ground requires some timbering. A cross-course had been driven north 55 fms. The shallow adit had been opened, driven in former workings 159 fms. An old level had been also opened in Little Bryn, adjoining the mine, in which it is reported two lodes had formerly been known to exist.

At Bryntail Mine meeting, on the 16th inst., the accounts showed a balance in favour of the mine, 110L 8s. 4d.

At Cefn Bruno the lode in the 24 west is 3 ft. wide, yielding 3 tons of lead ore per fathom; the adit west 1 ton per fathom. The western shaft is now in course of sinking.

At Wheal Fanny they have a lode full 12 ft. wide, the ore part about 3 ft., with good lead ore. The new water-wheel will be in operation in two or three weeks. The recent discovery here is causing some excitement.

At Lyford Consols, the water at Wheal Adventure is forked 9 fathoms under the 12 fathom level. The Fanny lode has been driven upon about 7 fms., presenting a very flattering appearance—the flockan part spotted with lead ore of good quality, similar to that at Wheal Fanny.

At West Wheal Rose, operations have commenced, showing a spirited intention on the part of the shareholders. The ground has proved harder than expected. The lodes seen in the adit level promise well; we would, therefore, advise the party to sink their shaft with all expedition, and drive the cross-cuts, so as to lay open the ground as fast as possible in the deeper levels.

The Llwynmae Mine Company have entrusted the future management to Messrs. John Taylor and Sons, and made a call of 1s. per share, for the purpose of clearing off some liabilities. At present, operations at the mine are suspended, but expected to be speedily resumed.

Messrs. Arthur Dean and Adam Murray have recently inspected West Polgoeth Mine, and by their reports (which are among our Mining Correspondence) it appears the lodes all underly north of east, two of them about 6 ft. in a fathom, and the middle one about 1 1/2 ft.; their direction nearly north-west. An adit, 17 fms. deep, has been driven on these lodes. The engine-shaft is sunk 12 fms. below the adit, and sinking deeper, in fair killas ground, at 57. per fm., the water being drawn by a disc engine 35 in. in diameter, the lift consisting of pumps 9 in. bore. The tin lode in the bottom is 1 ft. wide, capable of yielding 27 sacks per fm. In the cross-cut south, in the adit level, a well-defined tin lode was cut, 4 ft. wide, close under a decomposed elvan course; it does not appear to have been wrought below this level. Stamping machinery is likely to be required, and for some time to come might be advantageously employed by connecting the same to the engine already at work. The report from the agent, subsequently received, fully confirms these remarks.

At East Wheal Russell, the lode in the Tunnel level has greatly improved; in the rise in the back of the level the ore part of the lode is 20 inches wide, containing very rich ore—some of the stones of ore broken weighing 125 lbs. The lode in the end is 6 ft. wide.

Considerable business has been done in Wheal Lovell shares, and at moderate prices in reference to their value. The dividend is 8L per share per annum; and they write as follows from the mine:—"You may depend that, when we have had a few more dividends, these shares must look up, as they are in most respectable hands. The mine is looking well, and the tin trade is in better state than it has been for years."

At Bwlch Consols they are breaking about 80 tons of silver-lead ore monthly. They are at present returning about 45 tons monthly, and have sampled that quantity for the present month, the remainder being left as reserves in the mine.

At Allt-y-Crib they are breaking about 40 tons of ore monthly; and the western part of the mine, called Llwyn Adda, is now opening good tributary ground.

At Court Grange they have sampled 30 tons of ore from Penycen, and 3 tons at Llettythynhen, the proceeds of which are expected to be 450L to 500L. The ore ground in these mines is extending.

At Daren they have sampled 20 tons of rich copper ore, and have 10 tons of lead ore broken on the bank.

At Cwm Daren they have sampled 10 tons of lead ore and 10 tons of copper ore. The 10 fm. level is opening ground worth 15L per fm.

At Cae-Gwyn they have sold about 10 tons to Messrs. Sims, Williams, and Co., at 9L 14s. per ton.

At Grogwinion they have sampled 10 tons of rich ore, and have now drained the old works under the long drift, where they expect to raise good quantities of ore shortly.

At Penrhian, since they have had water, they have cleaned about 6 tons, and will sample 10 tons next week; but as the operations at present are very limited, the returns will be small.

At Wheal Guskis they have a fine course of tin in the 10 fm. level; it is about 1 ft. wide, and nothing better is supposed to have been seen for some years. It has created much interest in the neighbourhood, and hundreds of people have been looking at the stuff drawing. On Martin's lode also they are breaking some good grey ore.

During the week shares have changed hands in Alfred Consols, Bedford United, South Tamar, Merllyn, Wheal Trewane, Trelawny, West Providence, Tremayne, Butterdon, Cwmydyle, Rock, Mary Ann, Treleigh, East Russell, East Boringdon, North Downs, Great Alfred, East Wheal George, Wheal Venton, Lemon, Crebor, Wheal Golden, Wheal Arthur, Trenau, West Callington, West Wheal Rose, North Trelawny, Pennant, and Craigwen, Tavy Consols, Trevylian, Black Craig, Boringdon Park, Caradon Wood, Wheal Williams, Franco, Mary Emma, Peter Tavy and Mary Tavy, Wheal Samson, West Downs, Garris, Great Wheal Martha, Darn, Great Bryn Consols, Allt-y-Crib, Wheal Brewer, West Damsel, and Mining Company of Ireland.

In Foreign Mines, the transactions have been in Australian, Copiapo, St. John del Rey, Cobre, Santiago, and United Mexican.

From the Alten Minen advices have been received to the 26th Sept., the produce being 194 tons of ore per assay, yielding 976 tons of fine copper. The workings in Raipas are unusually poor, and the returns very trifling; the only explorations now making are to get under the run of ore ground south-east. At Labouchere's the prospects are encouraging. The lodes had just been intersected in the United Mines, not cut through, but what they could see of it contained some good ore, and looking promising. At Woodfall, the tributaries in the backs are meeting with success, and the prospects in the Old Mine are encouraging. The north-east stope is yielding from 5 to 6 tons per fm. The stope from the shaft are yielding 4 tons of ore per fm., but more mandie in it than usual.

The Linlithgow Mining Company has received advices to the 11th instant.

The shaftmen and others were busily engaged completing the change of pitwork. The eastern stope in the 55 were worth 3 tons per fm.; the 45,

east of Shaw's, 2 tons. The ground, in several instances, is becoming harder to explore. Lead ore weighed in, 57 tons 10 cwt.; total in stock, 208 tons 16 cwt.

The United Mexican Mining Association are in receipt of a letter from the Foreign-office, stating that Lord Palmerston has received the assurance through Mr. Doyle, her Majesty's Chargé d'Affaires, that the Mexican Commission would speedily meet to decide on the mode of payment of the company's large claim on the Government, amounting to \$350,000, or (say) 80,000L. In the present state of the company's affairs, the receipt of this large sum would prevent the necessity of any fresh calls being made upon the shareholders for the purpose of giving the mines a fair trial. The following statement shows the present financial position:—

Debt due from Rayas ..... 330,000  
Ditto from Mexican Government ..... 250,000  
Quicksilver mines and other property ..... 400,000 - \$1,050,000

Assets in London ..... 55,000 = £1,105,000  
or, in sterling, about 221,000L—say, equivalent to 52 per share. It is to be hoped that the embarrassments of the Mexican treaty will not cause an indefinite postponement of the settlement of the company's claims, incontestable as they are.

From the Copiapo Mines advices are to 24th August (the agent's report will be found in another column). Owing to a scarcity of native labourers, through sickness and death, the produce of copper for July was only 41 tons; the epidemic, however, seems to have terminated. The accounts from the silver mines are not quite so favourable as were expected; the arrival of a party of young Cornish miners would soon enable the manager to prosecute certain points, which at present are all but suspended.

From the Royal Santiago, advices are to the 24th Sept., the expected returns for which month are only 80 tons of ore. In the winze below the 15 the lode is 5 ft. wide, yielding 5 tons of excellent ore per fathom; it has been holed to the 22 fm. level about 9 fms. west of Taylor's shaft, and they are stopping the lode east and west of the winze. The 22 west is turning out about 3 tons of ore per fm. Taylor's shaft will now be resumed sinking; the water is quick, the mules are obliged to be driven hard to keep it 15 feet below the 22 fm. level. Thompson's engine-shaft is sinking by day, likewise the Ysabelita shaft. If progress in these can be made without hindrance, better accounts may shortly be expected.

The Australasian Mining Company has received advices to the 24th of June. The agent says—"The mine continues as last reported by Capt. Phillips [not yet to hand]. The stamps are working most excellently. Nothing shall induce me to check the workings, which are more satisfactorily in all parts, and mostly providing material for the stampers. I have great satisfaction in being able to report that I have arranged to sell our stamped ores to the Yatala Company."

The Worthing Mining Company have received advices which state, that at the water-shaft the lode had produced stones containing good quality copper ore, composed of (at 30 fathoms deep) copper, manganic, spar, and flockan. At the Gully end south, they had cut into a lode 13 feet wide. It is composed of spar stained with iron, containing minute particles of copper and manganic and stones tinged green. The character of the country, adjoining the west wall, is killas with reddish-coloured veins running through it. The agent, Capt. John Richards, recommended sinking a new shaft further east, when the present one would be serviceable for air and as a whim-shaft. The engine would be delayed a few days through the illness of one of the smiths. The Middle Gully south had been driven 78 fathoms under gossan, which presented a uniform appearance, with stones and specks of copper and manganic.

The Annotto Bay Mining Company have received advices from their agents at Jamaica to the 26th September, stating that at the Abbey Green Mine the workings had been extended, and large masses of fine quality copper ore extracted, weighing from 2 to 3 cwt. in a stone, and that a shipment of the ore would soon be made.

The excitement arising from the highly-favourable accounts which have, for some time past, been received from California, appears to be on the increase. Numerous small local partnership adventures are said to be progressing most satisfactorily, while the returns of the original Mariposa Company appear to be immense: several companies are actively organising here, and at Paris one has just been formed, under the title of the Nouveau Monde, with shares all paid up. From the latest accounts new discoveries of rich auriferous quartz were being made; and yesterday, we understand, two samples were assayed by Messrs. Johnson and Co., of Hatton-garden—one giving a value of 13,400L, and the other 24,500L per ton, though, by the naked eye, scarcely any gold can be seen.

Letters from Montreal, in confirmation of previous accounts, state that the auriferous regions to the south of Quebec, on the waters of the Etchemin and Chaudiere, yield a moderate quantity of gold. There are two or three companies working in different sections, and they pay their expenses; beyond that they cannot boast of much success. The auriferous district extends into the north-westerly portion of the state of Maine, and according to the report of Mr. Logan, the provincial geologist, it includes a section of the eastern township.

An interesting communication, from our intelligent correspondent at Adelaide, will be found in another column. By the courtesy of our friend, we are enabled to periodically present a faithful review of mining progress in the colony, on which the utmost reliance can be placed. We are also similarly situated with regard to Spain, one of our earliest contributors having signified his intention of communicating all matters of interest from thence; and we shall hardly add, that we shall esteem very highly such authenticated details as we may receive from California, and other parts, where mining industry prevails. At Lake Superior, we unfortunately lost a very able correspondent in the late Capt. Oliver Mathews: doubtless, among the numerous body of intelligent gentlemen engaged in that district, we shall not be long without a successor to our friend.

The West India Mail arrived on Thursday: the freight included—Gold in bars, value \$371,050; gold dust, \$51,022; gold coin, \$12,170; silver bars, \$462,021; silver in dollars, \$375,614; platinum, \$2000; plate pina, \$8240; silver ore, \$1280; precious stones, \$32,690; the total amounting to \$1,316,097, or 263,219L sterling: besides miscellaneous cargo, valued at the sum of 25,743L.

A considerable business has been done during the week in Bank shares. London and Westminster share are attracting a good deal of attention, and, on the whole, the price is well supported. Union of Australasia and Union of London are very firm. The sales of the week are as follows:—Australia (40L paid), 37 37 8 ex div.; London Joint-Stock (10L paid), 18 12 1; London and Westminster (20L paid), 29 1 30 29 8; Oriental Bank Corporation (25L paid), 26 2; South Australia (20L paid), 25 4 1; Union of Australia (35L paid), 35 4; Union of London (10L paid), 15.

In Dock shares there is not much movement, but prices are well supported, and London stock has risen 14. Commercial stock is quoted 8L; East and West India, 142 12 12; London, 114 11 15; St. Catherine, 79; Southampton, 17 16 3.

In steam-boat shares there is little doing. Prices stand as follows:—General Steam Navigation, 27 ex div.; Pionuslar and Oriental Steam, 67; ditties new (10L paid), 15; Royal Mail Steam, 79, 80.

Miscellaneous shares are quoted as follows in the official list:—Assam Tea Company, 9; Australian Agricultural, 15; Australian Trust, 29; Anglo-Mexican Mint, 23; Canadian Company, 47; Hudson's Bay Stock, 206; Price's Patent Candy Company, 23 23 ex div.; South Australian, 23; Van Diemen's Land, 1.

#### ACCIDENTS.

*Callington Mines.*—About 1 cwt. of powder had been used for blasting a hole, when, after waiting about an hour for the fowl air to escape, William Ever descended the shaft; the air of which was so bad that he is supposed to have been rendered insensible, in which state he fell from the kibble, and was killed. Another man, Samuel Daniels, then descended by the ladders, and, not returning, a third party descended, and found Daniels setting down on one of the spokes of the ladders, quite dead. Both men have left large families to lament their untimely end.

*St. Erth.*—A man named Birch fell down the shaft at Wheal Squire, and was killed.

*Gwennap.*—John Oates was killed by falling from the 194 to the 208 fathom level, at the United Mines.

*Folkestone.*—T. Colley had his back bone and several ribs broken by a fall of roof at Messrs. Dixon and Hill's colliery: the poor fellow lies in a hopeless state.

*Sedgeley.*—At Mr. B. Gibbons' Deepdale Colliery, T. Oakley, aged 13 years, foolishly held on to a skip while ascending, and, when near the top, lost his hold, when he fell to the bottom, and was killed.

*Sheffield.*—G. Butcher was killed by a fall of roof at Messrs. Stevenson's and Co.'s colliery, at Locksfield.

*Holywell.*—J. Bellis fell down the shaft at the Halkin Mine, and was killed.

*Eccles.*—J. Gregson was killed by an explosion of fire-damp in Messrs. Bromhill's Royal Colliery.

*St. Holes.*—T. McGuire fell out of the bucket at the Laffack colliery, and was killed.

*Sunderland.*—W. Brown was killed in Sherburn-house pit by an extensive fall of roof.

*Tredegar.*—Two miners, Lewis and James, were seriously injured by an explosion at the New Darren Coal-Works.

#### BLACK TIN.

*Mines.* Tons c. gr. Rs. Price. Tons. Purchasers.  
Min. Pool ..... 1 12 1 12 ..... £42 15 6 ..... Bollith & Sons.  
ditto ..... 0 10 1 15 ..... 42 15 6 ..... ditto  
ditto ..... 0 11 2 6 ..... 44 12 6 ..... ditto  
Poldover ..... 20 0 0 0 ..... 48 17 6 ..... Calewick Co.; Williams.  
ditto ..... 3 10 0 0 ..... 58 17 6 ..... ditto  
ditto ..... 0 12 0 0 ..... 40 10 0 ..... ditto

#### LEAD ORES.

Sold at Aberystwith, on the 20th October.

Mines.	Tons.	Price per Tba.	Purchasers.
Frongoch	80	£10 8 6	Sims & Co.
Cwmystwyth	50	10 7 6	ditto
Nantose	45	9 8 6	ditto
		Total tons, 175	Amount of money, £1776 17s. 6d.
Ticketings at the King's Head Hotel, Holywell, on the 23rd October.			
Pant-y-mwyn	15	£9 16 0	Walker, Parker, & Co.
ditto	15	9 16 0	Newton, Keates, & Co.
Pen-yr-henblas	52	10 11 0	J. P. Eytom.
Westminster	52	10 7 0	Walker, Parker, & Co.
ditto	26</		

## NOTICES TO CORRESPONDENTS.

"G. T." (Tyndrum).—The firm of J. and T. W. White, Glasgow, are large manufacturers of cyanide of potash, and purchasers of both Norwegian and American chrome of iron. Information, as to its market value, could be obtained from them.

THE GENERAL MINING COMPANY FOR IRELAND.—Sir: "Midas" is not the only one that has cause to complain of the difficulty of getting information respecting this exclusive concern. Though a small proprietor from its formation, and honoured twice a year with permission to attend its annual meetings, and, of course, participating in its 20 per cent. dividends—which, by-the-way, from what I hear of its capabilities should be nearer to 300 per cent.—I am unable to procure the slightest possible particulars respecting their proceedings. Surely, Sir, where such apparent success attends their operations, the directors can have no real cause to keep such inviolable secrecy. Why not publish, say a monthly report, in your Journal, for general information?—A SHAREHOLDER: Oct. 22.

"C. P. C." informed that the best cobalt ore found in Cornwall, in anything like marketable quantity, was at Wheal Sparrow and Corner-stone Mine, Redruth, about 34 years ago.

EAST CROWNDALE MINE.—In our Journal of the 11th inst., instead of the bearing of the south 200 inches, read degrees; the 73 fm. level, say 12; and in the last line but one, shaft should be soft.

MINING APPOINTMENTS.—Several mines having altered the days on which they hold their account meetings, as also their pay days, our correspondents will oblige us at all times by communicating such alterations, so that our list may be as accurate as possible.

BRACKS FOR UNDERGROUND INCLINES.—Sir: If "An Enquirer" (in last week's Journal) will forward me the angle of his inclines, I will furnish him with either a drawing or model of a small apparatus, which I have reason to believe will answer his purpose.—R. J. H.: *Sundriand*, Oct. 20.—[A letter addressed to "R. J. H." forwarded to our offices, will reach him.]

"A Shareholder" (Chepauk) had far better attend the next meeting, and bring the subject before the proprietors: the publication of his letter would cause much ill-feeling and dissatisfaction—which, perhaps, enquiry and explanation may in a great measure prevent.

Sir: Will you oblige by stating the mining law of the following case?—A READER: Oct. 23.—A, the owner of a mine, sells a certain number of shares to B, who pays 40 A the money for the shares, and takes a receipt for it; but A neglects to make any entry of the sale in the books of the mine, and B, when he has an opportunity of selling, cannot, because he can give no transfer, nor proof of holding. How, in such a case, can B compel the entry and registration of his shares, in order that he may sell?—[We think there can be no difficulty in the matter: if B took a receipt of A on paying the money, he has a *proof* of legally holding, and, on application to the Stannary Court, he could be compelled to make good the transfer. The Vice-Warden has lately shown a determination to compel transfers to be completed by purasers in a reasonable time, or punish them for the neglect. How was it B did not see to the transfer or entry, and accept in the usual way at the time? If the mine is not in Cornwall, it is, of course, a case for the courts of common law.]

PROVIDENT CLERKS' ASSOCIATION.—We omitted, in our article in last week's Journal, an important point—viz., that clerks, being members, in case of permanent calamity or distress, are eligible to an annuity themselves of from 23*l.* to 35*l.*, and their widows, afterwards, to the annuity (we referred to) of 12*l.* to 25*l.* per annum, according to length of membership of the husband's.

"C." (Suffolk-street) is informed that the shares named were sold at 11. 10*l.*, as stated by the brokers who supplied us with the information, during the week ending the 4th inst. We never traffic in shares ourselves, and are, therefore, dependent on others for the list of prices, as we are also for the amount of calls made in the various mines. He had better apply at the office, in Adam's-court, Broad-street.

AGUA FRIA GOLD MINING COMPANY.—Sir: In the prospectus issued by this company, they state they have obtained a lease from Messrs. Palmer and Cook, of San Francisco, of certain gold districts in California. I do not wish to throw cold water on any project; but it is announced that one of these gentlemen is believed to be the Mr. Palmer, who, as engineer-in-chief of the Anglo-Californian Company, obtained a lease for that company, and then kept it for himself. I make no further remarks; but, being anxious to embark in an apparently desirable undertaking, and deterred from so doing by the assurance of the fact being as here stated, am also being referred for corroboration to the office of Albion Chambers, Adelphi, I think it only fair that the parties concerned should have an opportunity of settling the matter right on a point calculated to throw, at least, discredit on their proceedings.—E. W. B.: *City*, Oct. 25.—[I enclose you my card, in proof of sincerity.]

\* \* \* We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses—not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

## The Theory of Mineral Veins,

BY EVAN HOPKINS, ESQ., C.E., F.G.S.

We have pleasure in announcing, that the chapter on this important subject, as newly written for the second edition of Mr. Hopkins's work on "Terrestrial Magnetism," will appear, as a series of papers, in the MINING JOURNAL, with the necessary illustrations.

## The Cost-Book System.

Having repeated applications for particulars respecting the Cost-book System, we have reprinted, as a pamphlet, the paper descriptive of its principles and practice, which appeared in the MINING JOURNAL. Copies can be procured through any bookseller or newsman, or at our office, price 6*d.*

\* \* \* It is particularly requested that all communications may be addressed—

TO THE EDITOR,  
Mining Journal Office,  
26, FLEET-STREET, LONDON.

And Post-office orders made payable to Wm. Salmon Mansell, as acting for the proprietors.

THE MINING JOURNAL  
Railway and Commercial Gazette.

LONDON, OCTOBER 25, 1851.

THE MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

The importance of a strict and efficient supervision of the working of our collieries has never been more clearly demonstrated than on Monday last, at the Wakefield Court House, when Messrs. STANFIELD and Co., of Flockton, preferred a charge against HENRY HOSKIN, a miner in their employ, for obstructing an air-gate in a coal pit in which he worked,—an account of which will be found in another column. It appears from the evidence that the offender, who had been of weak intellect from his childhood, finding the workings cold, had fixed two turn boards and laid his clothes on the top, which had the effect of stopping the air of the pit. The enquiry took place in the presence of Mr. C. MONTON, the Government Inspector, who had examined the pit and plan, and considered the lives of all were in danger during every moment the obstruction continued. The coal is what is called the Cromwell bed, which is so fiery that the men employed in getting it are obliged to work with safety lamps; this gentleman further says, "If the stoppage had been allowed to remain two or three hours, I consider that, under certain states of the atmosphere, it might have caused an explosion, sufficient perhaps to occasion the death of all who were in the pit. If violation of rules of this kind are allowed to common colliers, the results must be disastrous, for an explosion might occur five minutes after such a stoppage. In a coal mine there are a hundred contingencies from inflammable gas to be apprehended, if the supply of air be cut off."

No expressions can be more forcible than these, and it proves the conviction which we have always expressed, that the same Act for the inspection of mines and collieries was most inefficient, and not calculated to deal effectually with the ills which it professed to remedy. In the case before us, here was a man of weak intellect, and ignorant withal, in a position by which, through his folly, the lives of some score of his fellow-creatures were jeopardised. What is required, in addition to the usual supervision, is that certain fixed rules, according to the locality and circumstances, should be laid down for the governance of both the overseers and the workmen, and these in no case departed from; an efficient superintendence would always be able to modify them, so as to be effectual at all times and seasons. The absence of some such code was fearfully felt, on Saturday last, at Messrs. BALDWIN's colliery, near Pot House Bridge, Bilsthorpe. It would seem that the engine belonging to the pit is used for the double purpose of pumping and winding. At night it was customary to throw out of gear the winding apparatus, in order to let the pumps work without interruption. On the evening previous to the accident, the bands had been thrown out of gear as usual. In the morning, the night engineer, finding the water out, stopped the engine, and threw the bands in gear, as he thought, ready for operation upon the arrival of the day engineer. On lowering the skip, in which there were seven men and six boys, they began to descend with such fearful velocity, that it was evident the engine was out of gear. The unfortunate individuals were precipitated a depth of 120 yards, the band chain became detached, from the sudden jerk at the extreme end, from the engine shaft, and the chain, of about two tons weight, fell to the bottom, and buried the sufferers in its iron coils. Two of the boys were dead, and the remainder most seriously mutilated. The coroner's jury returned a verdict of "Manslaughter" against JONES, the engineer. This man probably will be tried and punished. We would not wish here to say what the extent of his punishment may be, nor would we interfere with the verdict of the jury. He, as well as the unfortunate

victims who have suffered from his negligence, or ignorance—for we will not say culpability—are but the victims of an ill-ordered system, its only merit being that of singular inefficiency for all good purposes.

We are under the painful necessity of recording these melancholy accidents frequently; scarce a week passes but some fresh calamity has to be registered, and we trust that those members in the Legislature representing the mining and colliery districts will direct their attention to the amendment of an enactment which, though well intended, has proved, from its working, nugatory. What is required is not to know the cause of evils after they have occurred, but their prevention.

In the MINING JOURNAL, of the 28th of June last, we noticed the passing of the Act of Parliament, 14 and 15 Vic., chap. 94, for the "Modification, definition, and amendment of the Mineral Customs of certain parts of High Peak, in the county of Derby, part of the possessions of His MAJESTY's Duchy of Lancaster; to make provision for the better administration of justice in the Barmote Courts therein; and to improve the practice and proceedings in such Courts."

We then gave a general outline of the enactments it contained; but having before us a treatise on the Act, \* analytically and practically arranged, containing valuable and interesting matter on the duties of the King's-field, and the practice and proceedings of the Barmote Courts, we now proceed to take a somewhat more comprehensive view of the subject. THOMAS TAPPING, Esq., Barrister-at-Law, of the Middle Temple, is the author, a communication from whom appeared in the MINING JOURNAL of the 11th inst., stating some of the imperfections of the Act; these appear not to meet the approbation of correspondent of last week, under the signature of "A. P." stating himself to be the owner of mineral property in the Peak. In another column will be found a reply from Mr. TAPPING; and as his explanation is, we think, fully borne out by the contents of the work and ancient customs of the district, we now proceed to give a running commentary from the work, that our readers may judge for themselves. We will first premise that, although the Act is called the "High Peak Mineral Customs and Mineral Courts Act," yet it embraces a great part of the mining district of the Wapentake of Wirksworth; for the whole of the "King's-field" being within the Act, that part of it which is within the Wapentake must also be comprehended; the title is not, therefore, sufficiently comprehensive. Although the preamble states that it was passed to settle the territorial jurisdiction of the Barmote Courts, it creates greater doubts than before existed, and well justifies the statements made at the numerous meetings at Wirksworth, that the Act is inefficient. The other objections which "A. P." has attempted to confute, will be found well explained in the author's communication in another column.

We now proceed to the volume under notice. The author commences by stating his opinion that, when attentively considered, the Act is the most important, having relation to mines and minerals, that has for some years received the sanction of the Legislature, and far more comprehensive in its provisions, and simple in its conciseness, than the Forest of Dean or Stannary Acts, and eulogises the intentions of Government as evincing a wish fully to develop the vast mineral wealth of the United Kingdom, which far exceeds that of any other European state, and furnishes four-ninths of the raw mineral produce of all Europe, the annual value being 24,000,000*l.* sterling. The practical value of the Act will be speedily tested, as the first Great Barmote Court, to be held under its provisions, was held on the first Tuesday in the present month.

With respect to the great antiquity of mining operations in Derbyshire, it is stated that the whole mineral district has been immemorially governed by certain ancient laws, customs, and duties, the origin and commencement of which are of such high antiquity as to have baffled the researches of the most diligent enquirer. Historians seem, however, to be perfectly agreed that beyond all doubt the Romans, and probably the Britons, worked the lead mines of Derbyshire; the former having been governed by a code of mineral laws, not much unlike those which were in operation before the passing of the present Act. The laws were both civil and criminal, on which the author says—

Doubtless the civil part of the code fully and satisfactorily met the wants of the miners, as those provisions, although singular and unique, are yet reasonable. Our wonder, however, is strongly excited by a perusal of the criminal branch of the code, the punishments contained in which are singularly sanguinary and penal. How they could have been found by the jury, or have received the sanction either of the Royal Commissioners or of the Crown, all of the present age must be at a loss to conceive yet these laws were not only tolerated but enforced in England during nearly four centuries, and so late as the year 1653. The instance which it is proposed to cite of the brutality of their criminal punishments, is that which was consequent upon the thin attempt of stealing from the lead mines; it was, that the culprit be taken and stricken through the right hand in the palm with a knife up to the hilt into the "stew" (wood work of the mine), and there he be compelled to stand till he die, or else cut himself loose. In the latter case he was compelled to forswear the franchises of the mine. Pilkington's version of the punishment is inaccurate; it is, however, this, that the hand of the criminal was nailed to a table, and in that state was left without meat or drink, having no means for freedom, but by employing one hand to cut off the other.

It appears certain that for many years previous to the passing of the Act, the mineral laws and customs of the King's-field had, through neglect and disuse, become uncertain and undefined, and were also in many respects altogether inapplicable to the scientific mode of mining operations which had been brought into use. It, therefore, became necessary that a corresponding change in the law should be made, and this led to the passing of the Act. A schedule of the 28 articles and customs established by the Act is given; and while the author allows every merit to Government for desire to promote the best interests of the district, he clearly points out in annotations and cited cases where the Act is defective, and suggests the best mode of alteration and improvement. In the second chapter of the volume, the author treats on the remaining portions of the Act, which make provision for the better administration of justice in the Barmote Courts, and improvement in the practice and proceedings therein; and in an appendix an entire copy of the Act is given, with the schedules, forms of notices, &c., tables of fees, and a copious index. To all persons interested in the mining laws of Derbyshire, and in the progress of its mineral development, we confidently recommend this treatise as most lucidly explanatory of the Act in question.

It has of late grown too much the fashion with some sections of the daily press to reproach the metropolitan Government of the colonies with being the active cause of whatever distracts the peace, or checks the progress of society, in those distant and almost independent districts. The newspapers on this side the sea are as pat at laying the Kaffir war and the Australian league, now looming up in the southern horizon, to the charge of the COLONIAL SECRETARY, as if that distinguished nobleman had laid the train and applied the match, in both these instances, with his own hands. But the cool truth is, notwithstanding the heat of their contrary affirmation, that neither Lord GREY, nor any of the gentlemen in his department of the administration, have had any more to do with the origin of the war in the one case, or of the league in the other, than Tenterden steeple had to do with the formation of the Godwin Sands. The original causes of the Kaffir outbreak, and of the federal league in the Australias, were laid before Lord GREY came into power, or had seen the inside of the Colonial-office. This imputation of blame to the home Government comes with the least possible grace from those who, in the early part of the present Kaffir contest, accused the colonists of the Cape with having done what they could to make a conflict with the savages near them as probable a contingency as possible, in order, it was said, that they might, as in the preceding war, enrich themselves with the expenditure of inflammable gas to be apprehended, if the supply of air be cut off."

We never concurred in that imputation; and it is now laid aside by those who gave it currency, and in its place something which the Government has done, or which it has not done—for it is no matter whether they assign a positive or a negative cause of the war, so as it is thrust in at the doors of the office in Downing-street—is made the occasion of the contest which unhappily prevails. In the same way as to the Australian league, by which it is sought to control the acts of the Imperial Legislature and Government, and to give the colonists of that hemisphere a practical independence before they have procured it, either by arms, treaty, or purchase. This new agitation is set down to the inefficiency of the measure of last year, which was hailed by all parties, both in and out of Parliament, as a concession liberal up to the point of an enlarged generosity, but now reckoned a stepping-stone to, and justification of, the additional claims set

up by the Australian Chambers. This change and flutter of the colonial vanes, and the corresponding variation in the views of those who wait upon them, woulf, if at all imitated by those who are at the helm of colonial affairs, bring in that prevalent anarchy which is a thousand times more injurious than those occasional misconceptions and misapprehensions which are wont to mark the course of the most prudent and the most painstaking administrative ability. We are certainly sensible of something like admiration at the coolness of those who so sharply criticise the conduct of Government in great things, and yet are so encompassed with errors themselves in affairs infinitely less. Their steadiness of feature is wonderful; their stiffness of face is marvellous. For our own parts, instead of expecting that in a chain of dependencies so vast, so distant, and, in some instances, so uncivilised, the surface of society should be permanently unruled and undisturbed, we ought rather to lay our account for those interruptions to social peace and to political unity, which in states whose organisation is far more perfect and profound than that of the colonies, will, whatever be the amount of human vigilance, occasionally mar our prospects and multiply our repressive duties.

Referring to our remarks in the Journal of the 6th September, on the subject of "kitting," it is with regret that we have to report another case of a similar nature in the same locality, the purser in both mines being Mr. MICHAEL MORCOM, showing, however the folk of St. Agnes may be taunted as "totals," that some of their labourers are as cunning rogues as can be found elsewhere. At the Cornwall Michaelmas Sessions, JOHN PROUT, of St. Agnes, was charged with feloniously taking and removing tin ore from Polberro new adventure mine in that parish, the property of MICHAEL MORCOM, and others, the adventurers. Mr. H. S. STOKES conducted the prosecution, Mr. HOCKIN the defence. The prisoner was indicted under the Act 2d and 3d Victoria, passed for the prevention of "kitting"; he had been for some time employed there as a tributary. In September last he and pare rose a quantity of tin ore, and sent it up to surface for dressing; it was divided into two piles, the best being by itself, as usual. On the 13th of that month samples were taken in the ordinary way in presence of the prisoner, and sent into the sampling-house upon the mine, and close to the tin floors; it had two rooms one above the other, the under one being used for the purpose of assaying or testing by fire the quality of the ore, the place being carefully locked up, and the keys kept in the account-house. The captains, suspecting some fraud had been committed, determined to watch by night, one in each of the rooms; they accordingly went there and saw everything in perfect order, prisoner's samples included, upon which they placed a piece of heath, as they had before done on the Saturday night, and found it had been removed on their return on Monday morning, and the sample prilled, evidently showing some one had been in the room in the interim. On Monday night, about 11 o'clock, the two captains sitting concealed in the assay room, saw some one come towards the window and look in, who then tried the door, went round the house and opened the other door, from whence was a stairway up to the room over; up he went, and proceeded to the barrow where the samples were. Hearing the iron lid of a barrow lifted, the captains separated, the one to the lower door, the other to the higher one of the sampling-house, thinking to catch the culprit as he made his exit from either. Hearing one of the doors opened, they retreated a few steps, when two men rushed out, one from each door, and made their escape; the one from the upper room Capt. HANCOCK declared to be JOHN PROUT, and Capt. MARTIN was near enough to identify him; the former gave chase, but not succeeding in overtaking him, proceeded to his dwelling—he was not there. Capt. HANCOCK, on his way back towards the mine, heard two men conversing, and being certain PROUT was one of them took him into custody, and gave him in charge to a constable. The prilled sample would increase the prisoner's gettings from 3*l.* to 6*l.* per month. Prisoner declared his innocence, that he had not been near the spot, and was then coming from TOM TREGELLA'S public-house. The captains then proceeded to the sampling-house, found the barrows removed, and on the floor close by prisoner's sample there was a small bag containing some stones of rich tin ore, evidently prepared for prilling. One of the bags decamped that night, and had not been met with since, supposed to be the companion PROUT had with him in the house; this, with other circumstantial and strong corroborative evidence, was the case as against the prisoner.

The defence mainly consisted of evidence that both the captains, shortly after this occurred, had made statements contrary to their present evidence, and an *alibi*. W. NICHOLLS and JOHN BENNETT, tributaries, swore that they heard Capt. HANCOCK say the next day he could not exactly swear to PROUT, and when he took him in the lane he was in a very different kind of dress. HENRY ROUSE swore, that Capt. MARTIN told him on the Saturday following that one man bolted through the window, and that he did not see enough to enable him to swear it was PROUT. (Capt. MARTIN emphatically denied saying any such thing, or mentioning about the window). W. PARRELL, the constable who took charge of PROUT, asked HANCOCK whether he was sure PROUT was the man he gave chase to, and that HANCOCK's words were, "I believe so." HENRY HODD, a shoemaker, swore that he saw PROUT enter TOM TREGELLA'S public-house as the clock struck eleven, and about half an hour afterwards met him and JOHN DANIEL; all remained together till midnight, when they went to DANIEL'S house to get supper. JOHN DANIEL confirmed this and that it was beyond half-past twelve when PROUT quitted. The jury consulted together for above five minutes, and returned a verdict of acquittal.

The jury gave the prisoner, as in duty bound, the advantage of any and every reasonable doubt, and thus the case terminated; but this ought to prove a caution to evildoers in similar instances: for had the captains been as firm in their evidence to the point, and caught the culprits inside the house, as they ought, and might have done, the guilty parties would have been brought to justice, and suffered the severest penalties of the law. We cannot fancy how, when once they had the two rogues in the trap, they had not given alarm, and thus prevented their escape. They have this once done so, the next time they may not prove so successful.

SHARE DEALING.—(From a Correspondent).—At the Redruth County Court an action was brought by Thomas Tyacke, tinman and mine broker, of Camborne, against Mr. J. R. Pike, a shareholder of Redruth, for recovery of 11*l.*, alleged damages sustained by non-transfer of a share in East Tywarnhayle Mine, while it bore a premium; but now being worthless, the action was brought for recovery of the purchase money. The plaintiff appears to be everlasting in this court; his happiness, indeed, seems to consist in litigation; he has not only employed all the legal talent that attends it, but conducted innumerable cases, from briefs prepared by himself, to the amusement of all present, and this against ill-success—for in eight cases out of ten he has been on the losing side. He seems, however, determined to persevere, though it must cost him more than all the "pots, kettles, and pans," in his shop. In the present instance, upon presenting Mr. Pike's transfer to the purser for registration, owing to some irregularity, it was returned for correction prior to being duly registered. Seeing Mr. Pike shortly after this, he mentioned the circumstance, when Mr. Pike said, "You'll find it all right now,"—meaning, that if then presented it would be registered by the purser. Tyacke replied, "Very well"—but cunningly kept the transfer by him, to see (as it was inferred) which way the price of shares were likely to go—up or down: as, in case of the latter and a call, they standing in Pike's name, he would be called on and not himself—this actually occurred. Finding the share had at length become valueless, he attempts to repudiate the contract, and sue for recovery of the purchase money. His Honour read a wholesome lecture into the ears of the tinman, to a similar effect as the Vice-Warden in his decree, Nichols v. Stevens (see *Mining Journal*, Aug. 30), he "could not countenance such chicanery as leaving the shares unregistered for so long a time, and then attempting to rescind the contract on their lessening in value, which was literally speculating in another man's property; the verdict must, therefore, be given for defendant."

BESSEMER'S IRRIGATING MACHINERY.—A trial has been made at Liverpool with one of

## MINING ENTERPRISE—ITS PROGRESS AND PROSPECTS.

Continuing to solicit from our readers, connected with tin and lead mining, particulars of their monthly sales, in order that our quarterly account may be furnished in a more correct and satisfactory manner than hitherto, we now proceed with those mines whose sales of tin were particularized in the Journal of 4th inst.

Lewis Mines, tin and copper, at St. Erth, stands there as selling 12407. 11s. 3d. tin; whereas, their actual sales for the quarter were, 42497. 11s. 6d.—namely:

Union Smelting Company	Tons	60 19	2 14	£2952 16 6
Williams, Harvey, & Co.		18 6	2 9	1296 15 0

Total tons 79 6 0 23 £4249 11 6

and copper ore weighing 18 tons, at 6d. 14s. 6d. = 1217. 1s.: altogether enabling the directors to declare dividends, to the end of Aug. last, of 2*l.* per share—the outlay having been 17*l.* each—the mine 100 fms. deep.

Until the latter part of the 17th century all the Cornish tin was smelted in blast furnaces with charcoal; the decrease of wood in the county increasing the expense of charcoal naturally induced the smelters to adopt any substitute: they then adopted pit coal, which caused the erection of air reverberatory furnaces, in which the fuel and ore were separated, and culm coal mixed as a flux with the ore. The air furnace for smelting tin was erected about 1680; since which period nearly all the tin has been thus smelted in such furnaces. The year 1837, proving a peculiarly unprofitable one, the actual state of the tin mines was then ascertained for the information of Government, upon an application from the miners for the abolition of the duty of 4*s.* per 120 lbs. to the duke of Cornwall. The result was:—

Loss on 58 mines	£111,517 0 0
Less estimated increase in value of property in mines	£21,000
Profit on 40 mines	20,358 — 51,358 0 0

Net loss £60,159 0 0

Tincroft Mine comes next in order, and which was once so celebrated for the large quantity of tin it produced; it has during the last quarter sold 66 tons, value 2742L 6s. 2d.; and in the same period it has advanced its yield of copper ore to 2041 tons, at 4*s.* per ton = 8783L 15s. 6d. The quality also has improved from 3*s.* 11*s.* 6*d.* per ton, the preceding quarter. Highburrin tin lode, in the engine-shaft, is sinking below the 15*f.* level, worth 30*s.* per fm.; the 15*2* east, 9*f.*; the level above, 15*f.* per fm. The other levels and lodes are looking very well, and are likely to make as much profit as in the quarter just past.

Georgia Consols, situate in the parish of Towednack, St. Ives, comes next in rotation, having sold during the quarter, 23 tons 10 cwt. 3 qrs. 23 lbs., for 1176L 7*s.* 6*d.*: if a greater quantity, it was by private contract, of which we are not informed. These mines commenced operations in Feb., 1850, when they erected a new 28-inch cylinder steam-engine, sunk a new engine-shaft 13 fms. under adit, and by Christmas following those levels were exploring the lodes at that depth, upon Cole's and Lane's lodes, and cross-cutting to intersect others north and south. The concern adjoins the Great Wheal Reeth, Reeth Consols, and Wheal Margaret, the lodes of which have invariably yielded large quantities of tin ore. The concern is divided into 2500 shares, of 2*s.* 10*s.* each; but as they have taken no steps to supply us with the particulars of the progress making, we have only these scanty items to offer.

Yeoland Consols Tin Mine, near Plymouth, sold, during the last quarter, 6 tons 10 cwt. of tin ore, for 327*s.* 17*s.* 6*d.*; the sets are very extensive, being a mile on the run of the lodes, which are both tin and copper. The information we derive from thence is so meagre, that we have nothing further to report as regards this adventure.

Boscean Mine (St. Just) disposed of 5 tons 17 cwt. 3 qrs. in the last quarter, amounting to 305L 16*s.* 1*d.* This concern is in 240 shares, held principally by parties resident in the west of England, and may almost be called a private company. At all events, like many other of the tin mines in that neighbourhood, the parties interested prefer keeping all the information to themselves, rather than forward it occasionally to us for publication and circulation around the world, which might tend to some good, and, at all events, could prove of no injury to any one.

[To be continued in next week's Mining Journal.]

**GOLD MINING.**—We have examined with much pleasure some important improvements in the mechanical and chemical treatment of the gold quartz and debris, invented by Mr. Andrew Smith, C.E., which will effect a considerable saving of expense in the treatment, while a great deal more gold will be extracted. Such an invention must be very important for the mining operations in California and Australia, as it is well known by the gold miners, mineralogists, and assayers, that much of the gold at present remains unextracted. As soon as the patents are secured, we are promised that we shall be enabled to publish the particulars.

**CALIFORNIA.**—The accounts from the mines generally continue to be very satisfactory. One vein in Mariposa, worked by a steam machine, was realising \$600 to \$1500 daily. A company of four men, working a quartz mine at Mount Ophir, were taking out on an average \$3000 a fortnight; and the Canon Creek Mining Company were realising upwards of \$5000 per day. As the attention of miners has recently been turned almost entirely to machinery, the probability is that the product will largely increase. The construction of machinery for crushing the rock by water-power will enable the miners to work in sections, which hitherto been neglected. It is estimated that the shipments from San Francisco, from the 1st of Sept., will average \$6,000,000 per month. The Quartzberg companies are now in the full tide of successful operation. The Washington vein, worked by the Texas and Georgia Mining Company with new and expensive machinery, has scarcely as yet had a fair trial. The rock in this vein is filled with crystallised quartz, the gold in which, although scarcely perceptible to the naked eye, will yield from 12 to 25 cents, per lb. The Spring vein is located about half a mile from the above, where 50 Mexicans are now at work. A blast which has been recently put into the rock, brought to light rich deposits of the precious ore. The other principle veins in this vicinity are the Eureka, Dorr's Mount Ophir, and Gaine's. The latter is exceedingly rich. Four men have taken out as high as \$3000 in a fortnight. The rock throughout this vein is impregnated with fine gold. The veins in the valley are generally owned by companies of from 12 to 25 persons all of whom are endeavouring to procure additional machinery for carrying on their operations.

**AUSTRALIAN GOLD MINES.**—As the advantages and disadvantages of the two systems of government existing in California and Australia, so far as working the gold mines are concerned, have been the subject of some discussion, the following provisional regulations, under which licenses are granted for the purpose of gold digging, by the Colonial Secretary at Sydney, will be found of interest to our readers:—

**LICENCES TO DIG AND SEARCH FOR GOLD.**—Colonial Secretary's office, Sydney, May 23. With reference to the proclamation issued on the 22d May inst., declaring the rights of the Crown in relation to gold found in its natural place of deposit within the territory of New South Wales, His Excellency, the Governor, with the advice of the Executive Council, has been pleased to establish the following provisional regulations, under which licences may be obtained to dig, search for, and remove the same:—

1. From and after the 1st June, 1851, no person will be permitted to dig, search for, or remove gold on or from any land, whether public or private, without first taking out and paying for a license in the form annexed.

2. For the present, and pending further proof of the extent of the gold field, the license fee has been fixed at 1*s.* 10*s.* per month, to be paid in advance; but it is to be understood that the rate is subject to future adjustment, as circumstances may render expedient.

3. The license can be obtained on the spot from the commissioner, who has been appointed by His Excellency the Governor to carry these regulations into effect, and who is authorized to receive the fee payable thereon.

4. No person will be eligible to obtain a license, or the renewal of a license, unless he shall produce a certificate of discharge from his last service, or prove to the satisfaction of the commissioner that he is not a person improperly absent from his hired service.

5. Rules adjusting the extent and position of land to be covered by each license, and for the prevention of confusion and the interference of one license with another, will be the subject of early regulations.

6. With reference to lands alienated by the Crown in fee simple, the commissioners will not be authorized for the present to issue licenses under these regulations to any person but the proprietors, or persons authorized by them in writing to apply for the same.

By His Excellency's command, E. DEAS THOMSON.

**FORM REFERRED TO—GOLD LICENSE.**—No. —. The bearer, —, having paid to me the sum of £1 10*s.* on account of the territorial revenue, I hereby license him to dig, search for, and remove, gold on or from any such Crown land within the county of —, as I shall assign to him for that purpose, during the month of —, 185 —, &c., as to the Peak; also Manlove, in describing the jurisdiction of the Great Barmote Court for the Wapentake, says— I. 115, 118.—

The license must be produced whenever demanded by me, or any other person acting under the authority of the Government. (Signed) A. B., Commissioner.

**SAFETY APPARATUS, FOR PRESERVING LIVES AT SEA.**—Mr. John Keyse, the inventor of the apparatus, previously described in our Journal, for the preservation of life and property at sea, made a most successful experiment in the River Thames on Wednesday. Mr. Keyse fully demonstrated the practicability of stemming the tide and crossing the current, thereby providing for vessels in danger the means of reaching the shore; at once removing all necessity of life-boats, or other apparatus, and attendant risks.

## Original Correspondence.

## MINING IN DERBYSHIRE—THE HIGH PEAK ACT.

SIR.—I beg, through you, to thank your correspondent, "A. P.", for the very courteous manner in which he receives and deals with my objections to the High Peak Act (14 and 15 Vic., c. 94); and I trust that he will, in the same good spirit, accept the following replies to his observations.

1. "A. P." has failed to convince me that no part of the Wapentake of Wirksworth is included in the Act, or that such Act is confined to a district entirely within the Hundred of High Peak; and that there does not exist in the same Wapentake the inconvenience of two valid sets of mining customs. My argument is this:—first, the King's-field (or, as the High Peak Act should have called it, the Queen's-field; see *Duc. Lanc.*, vol. cxxxix., Nos. 28, 57, in 40 *Eliz.*) comprehends nearly all the Wapentake of Wirksworth and a considerable portion of the Hundred of High Peak; in other words, the King's-field runs into, and forms part of both the Wapentake and of the Hundred (see *Pilkington's and Lyon's Histories of Derbyshire*); and, secondly, the Wapentake is governed by similar, though not the same mining customs as the High Peak (see *Manlove, Petts, Fod, Reg., Houghton, &c.*) Now the Act under comment (14 and 15 Vic., c. 94), by sect. 16, enacts, "That the jurisdiction of the said Great and Small Barmote Courts, and of this Act, shall be held to extend over the whole of the before-mentioned district, called the King's-field, and also over all the parts of the Hundred of High Peak, &c." Thus, as the King's-field forms part of the Wapentake, and is also within the Act 14 and 15 Vic. c. 94, so such Act must have jurisdiction over part of the Wapentake. Also, as the Wapentake was, before the passing of the Act, 14 and 15 Vic., c. 94, governed by certain mining customs, and as such Act provided a set of different mining customs for part only (King's-field) of the Wapentake, so since the Act there must exist in the same Wapentake the inconvenience of two valid sets of mining customs.

"A. P." will, no doubt, seek to, and can alone, argue that the words "before-mentioned districts, called the King's-field," embraces only so much of the King's-field as is within the Hundred; if so, how does he support it? Certainly not by any reference to the preamble of the Act; but should he, it does not help him.

2. "A. P." admits that the Act does not state either the quantity or quality of the estate of the Derbyshire miner in his mine. I appeal to common sense, whether this is or not a blot. "A. P." however says, "it depends upon the grant, conveyance, or will, under which he takes; it may be in fee simple, in tail, for life, or for a term of years." This is no answer at all, nor does it in any way concern the question. If a person, justified by his estate in the land, opens a mine therein, he does not require the protection of a Derbyshire custom, neither does he need the assistance of the Act, nor the good offices of a barmaster; and why? because he has the same estate in his mine as he has in his land. Also, why does the 19th art. declare the mine forfeited if unwrought? Does a purchaser or tenant in fee simple, see tail, &c., lose his estate if he fail to work his mines? Certainly not. The Act affords many other arguments (see arts. 9, 20, &c.) to show that the Derbyshire miner has no despicable or certain estate in his mine, but has only a mere right to mine.

"A. P." also says that "there is no more necessity for stating the nature of the estate (even if it had been practicable) than there would be for stating what estate landowners shall have in their land." As I have before stated, the rights of the mere Derbyshire miner and landowner are different, and for the most part antagonistic, so that there is no analogy between their estates, even if reasoning by analogy were sound. The best apology for the omission, for such it undoubtedly is, is that stated by "A. P."—viz. "that it was not practicable"—that is, consistently with the interests of the landowners, to state either the quantity or quality of the miner's estate, and, therefore, it has been omitted. I, however, remind "A. P." that in the Wapentake the miner's estate is certain, and is thus stated by *Manlove*:

"And he (by custom) that his mine doth free,  
A good estate thereby doth gain in fee."

3. "A. P." says that "mines being real estate, the widow is, both by custom and the common law, entitled to dower. I waive all objection to the correctness of this proposition, and am content to take it as the foundation of my argument. If, however, "A. P.", by the above quotation, assumes that the widow of a Derbyshire miner has a right to dower in her late husband's mere right to mine in the soil of another, I deny the soundness of the assumption. That mines are real estate, I believe no one doubts, but that a mere right to mine in the soil of another (which is all the Derbyshire miner has under the 14 and 15 Vic., c. 94) is real estate I deny emphatically. "A. P." also states that, by custom and the common law, a widow is entitled to dower. Granted as a general proposition; but to confer dower at common law, the deceased husband must have died seized of an estate of inheritance. As, however, the 14 and 15 Vic., c. 94, does not give him any such estate, so his widow cannot claim dower at common law. Again, in order to confer dower by virtue of custom, the existence of such custom must be shown. As, however, such a custom is not shown by the 14 and 15 Vic., c. 94, so the widow cannot claim customary dower under that Act; besides, if before the passing of such Act such widow had, by custom, a right to dower, that Act has most certainly deprived her of it by abolishing the custom; for section 16 declares that the mineral laws and customs of the whole of the therein above-mentioned district, called the King's-field, &c., shall, from and after Aug. 7, 1851, be such as are mentioned and comprised in the first schedule of the Act, and that no other alleged custom or practice shall prevail.

"A. P." further states "they are included in the Act 3 and 4 Wm. IV., c. 105, under the head 'Hereditament.'" Now, although mines may be admitted to be within the legal definition of that word, yet it must be re-considered that the Derbyshire miner has not a despicable estate in his mine, but merely, as before stated, a right to mine, such as a tenant for life has in open mines, whose widow, "A. P." will admit, has no right to dower.

"A. P." further says—"It was not intended by the Act to deprive the widow of her right to dower, and, therefore, it would have been improper specially to mention it." Why, then, I ask, were all the pre-existing customs, dower being amongst them, abolished by section 16, as before stated? In a word, the whole of my third objection is, that the Derbyshire miner, under statute 14 and 15 Vic., c. 94, has but a mere right to mine in the soil of another (it is a mere right, existing only so long as it is exercised conformably with the customs contained in the 14 and 15 Vic., c. 94), so dower, if it were intended to give it, should have been vouchsafed to the widow by such Act. *Manlove*, in his quaint poem on the "Wapentake Customs," specially mentions customary dower thus:—

"And he (by custom) that his mine doth free,  
A good estate thereby doth gain in fee;  
And if he die, and leave behind a wife,  
The custom doth endow her for her life."

4. Tithes should have found a place among the customs contained in the Act 14th and 15th Vic., c. 94. From the end of the 17th century, disputes concerning tithes have been a stumbling block to the Derbyshire miner, and although there may not now be, as there formerly was, the same ground for complaint, yet care should have been taken not to have omitted the statement of any duty to which the miner is liable. No one, I believe, who has impartially consulted the voluminous records upon the subject, can doubt that at one time the church had no right to tithe from the Derbyshire miner, and that, unfortunately, payments, both of ore and money, either gratuitously presented to the church by the miner, or extorted from him in return for masses and prayers, were, by long continuance, construed into tithe, or compositions in lieu thereof, which were afterwards enforced by the courts of law, and ultimately sanctioned by the Legislature.

5. I cannot admit that misdemeanors committed in mines are most properly dealt with by magistrates, and the ordinary tribunals of the country; on the contrary, I think they should have been made subject to the jurisdiction of the Barmote Courts. At all events, our forefathers so thought, and many are the instances of customs and laws, both in the Wapentake and Hundred, relating to the exercise of jurisdiction over felonies committed in mines. Thus see 16 Edw. I art. 11, *Petts, Fod, Reg.*, 85, 87, &c., as to the Peak; also *Manlove*, in describing the jurisdiction of the Great Barmote Court for the Wapentake, says— I. 115, 118.—

"To punish misers that transgress the law,  
To curb offenders and to keep in awe  
Such as be cavers, or do rob men's coys,  
Such as be pilferers, or do steal men's stows."

Also in *Arkwright v. Cantrill*, 7 A. and E. 565, Add. M.S. 1782—1835 (British Museum), collected by Adam Wolley, and a work called *The Complete Mineral Laws of Derbyshire*, p. 15, 18, 39, &c., many instances will be found of similar customs. I do not, as will be seen by the

above references, refer or allude to articles mistaken by me for customs but amongst others to the customs as found by the inquisitions made in pursuance of the commission issued by Edward I., which are the most ancient written customs that the Derbyshire miner can boast of.

6. As this objection is involved in the first, I refer to the observations I have made *supra* upon this point.

7. "A. P." admits that the Act does not require the steward to be sworn, and says that such a course is consistent with precedent; that there is no instance of a steward having been sworn, nor of any form of oath to be administered to him. My position is that the 14 and 15 Vic., c. 94, should have created the precedent, and that a form of oath should have been provided by it. "A. P." should recollect that by the 14 and 15 Vic., c. 94, the office of steward is for the first time instituted by the Legislature as independent of, and separate from, that of head barmaster. Formerly, as "A. P." is doubtless aware, the steward was a person skilled in the laws of the land and mineral customs of Derbyshire, called in at pleasure by the farmers of the duties, merely to assist the head barmaster in the trial of weighty causes; and that in process of time the assumed office of steward usurped that of barmaster in so many respects, especially in the trial of causes; that the office of steward ultimately became in public opinion superior to that of barmaster (Add. M.S. 6891, p. 390). I assert, therefore, that it was a great omission not to provide for the swearing in of the chief legal judge and officer of the Barmote Courts. I challenge "A. P." to cite a similar instance of a judge not being sworn to do his duty. In conclusion, I have merely to state that the steward ought to be sworn, his duties being—

To hold and preside at the great and small Barmote Courts, of which he is the judge.

To administer oaths to the barmaster, &c.

To attend and preside at views.

To fine and inflict penalties.

To return writs of *certiorari*.

To direct juries, to keep verdicts, and generally to do and execute the principal judicial and ministerial matters authorised by the statute 14 and 15 Vic., cap. 94.

Having, as I conceive I have, fully substantiated my seven positions, there remains but to make some few observations upon the concluding paragraphs of "A. P." letter. I reiterate that there are, as stated in my letter, many "other very serious omissions from, and defects in, the Act," many of which are mentioned in my Treatise. My object, however, in producing that work was not to cavil at, or to pull the Act to pieces; on the contrary, I confess myself to be the miners' friend, and have, from the period at which my attention was first drawn to the Derbyshire mining customs, which was long previously to the passing of that Act, uniformly been actuated by a sincere desire to see them restored agreeably with modern notions, and the scientific mode of mining now adopted in Derbyshire. Therefore it is that, in the first and last pages of the preface to my work, in which it is usually supposed an author speaks apart from his subject, I have commenced and finished with an eulogy upon both the Act and its framers; also, throughout the work, I have never failed to commend those of its provisions which I thought deserved it.

The statements that "several meetings have been already held

mineral kingdoms, by working of mines and fusion of metals, gotten by honest labour underground, profitable to man, and acceptable with God. I might here speak somewhat of superior planets producing metal—Saturn, lead; Jupiter, tin; Mars, iron; but Mercury, quicksilver; Luna, silver. If God permit me health and pleasure from suter and troubles, not only to write of them, but also the manner of the melting, extracting, refining, and reducing of them with pit cole, sea-cole, peat, &c. In the interim to let you know that Great Britain abounds with copper mines, much neglected, yet of great use for Ordnance, at land, and also at sea, and for the making of brass, with our *Zelis Calaminaria*, so much exported by the Dutch and Swedes to raise the price of copper and brass ever since our small loss at sea by the Dutch. Mercury, quicksilver, is not wanting, but few artists have made any experiment of that mine in this kingdom.

The existence of ores of mercury in Great Britain is by no means an unlikely circumstance, however much modern geologists may doubt upon that point, for there are several spots in South Wales where strong indications exist of the presence of such ores; indeed, some parts of Wales may, not inaptly, be termed a British California. But to proceed with the *Metallic Martis*:

Luna, silver doth abound in Great Britain, especially a very rich vein, rake, or fibre thereof was wrought at Binnyhill, near Lithgo, in Scotland, in the author's days, some part of which he hath no malleable silver in the ore or mine, yet neglected; and so are many of our richest mines in England and Wales, &c. The cause is conceived to be the want of a general and joyful stock for the employing our idle people in getting and working of the copper and silver mines. Of the planet Sol; I may not be silent, whose golden, glorious, pure, sulphurous, piercing spirit, communicating his virtue mineral, whose pure influence producing gold, caused the poor indigent people of Scotland, which the author did see, Anno 37, at Shortlough, six men, to dig and carry with wheel-barrows, the common earth or mould into rivolts remote, out of which those men did wash gold grains, as good as in the sand of the rivers, in which rivers many have gotten gold, and some grains of Sol, near one ounce weight, both in the lowlands and in the highlands; and also he hath seen gold gotten in England, but not so plentiful as in Scotland. For Sir James Hope, Anno 1634, brought from Scotland, bags of gold grains unto Cromwell, some of which grains were very large, and as fine as any gold in the world, that is in mines; thus I came to see the bags, taking a view of the lowlands and highlands of Scotland, Anno 37, in which year I spent the whole summer (in opening of mines, and making of discoveries); was it at Sir James Hope's lead hills, near which I got gold, and he coming to London, employed Capt. David Acheson, a refiner, whom I met in Scotland, Anno 37, to find me out. When I came unto Sir James Hope, dwelling in Whitehall, he produced the bags unto me, and poured the gold out upon a board, in which was one large piece of gold, which had to it adjoining a large piece of white spar, very transparent, which Capt. David Acheson, yet living at Edinburgh, saw; but I never met with Sir James Hope, hoping of these times to see good things acted, for I believe God is about to reveal many of his secrets unto his Israel in this latter age, which made me not to answer the letter of Sir James Hope. This Sir James Hope was a Judge at the City of Edinburgh, and by Cromwell made Lord Marshal of Scotland.

[To be continued in our next; with a few observations as to the lump of gold with spar attached to it, as described by Mr. Dudley.]

Nantygo, Oct. 20.

S. B. ROGERS.

#### HYDRO-CARBON FIRE.

SIR.—May I request the insertion of the following statements, with a few facts and figures, in the columns of the *Mining Journal*. Your correspondent, Mr. T. H. Leighton, in some remarks, in your Journal some years since, says that—

Combustion ought to be divided into two classes—one fixed or local, the other, gaseous or diffused. In the former, heat is produced by the combustion of the solid part of fuel or carbon; and it affects bodies only in actual contact, or very close proximity.

The use of this class of combustion and heat are limited—being confined for the most part to smelting or remelting metals in furnaces and cupolas. In the latter case, heat is the result of the combustion of gas, either previously existing in the fuel, or the result of the combustion of the solid part—that is, of the semi-combustion of carbon producing carbonic oxide. In combustion, carbon and oxygen unite in two separate proportions, forming either carbonic acid or carbonic oxide. The latter is a combustible gas, and requires as much more oxygen to convert it into carbonic acid as the carbon took up to form carbonic oxide. As the acid, carbon is fully saturated with oxygen, and in that case the greatest production of heat has been attained. Bituminous coal contains gas (carburetted hydrogen) and tar. Smoke and soot are thus having very fine minute particles of carbon in combination, which escape combustion for want of a supply of oxygen to consume them, and is so much waste of the most valuable part of the fuel. This is sufficiently apparent, and, at the same time, justly complained of as a great nuisance; but in the use of fuel containing no volatile matter in the form of gas and tar—*as charcoal, coke, or anthracite coal*—although there may be no visible sign of any waste of fuel, still, passing off as carbonic oxide, one-half of the fuel is wasted for want of a second supply of oxygen. For a perfect result, both classes of combustion require to be separately supplied with their full proportion of oxygen or fresh air. Upon the application of air to the gaseous part of fuel, many able and admirably-written articles have appeared in the *Mining Journal*, more particularly from your talented correspondent, Mr. Charles Wye Williams. Combustion, to produce gaseous or diffused heat, is of most general use, and comprises many of the most important applications of fuel. When combustion depends solely upon the draught of a chimney, it is next to impossible to furnish the gaseous products with their full supply of air; because, while the fire opposes resistance to the free passage of the air, if another aperture without resistance be opened for it, the bulk will rush in that way, and the active combustion of the solid part of the fuel in the fire will fall off, rendering the whole inefficient. The use of a blast is the only means of effecting perfect and total combustion; but the use of a blast is impracticable with common fire-grates—they are quickly destroyed. Some years ago, I ascertained that large quantities of anthracite coal, of very pure quality, some containing 92 or 93 per cent. of carbon, existed in the counties of Carmarthen and Glamorgan. I then conceived the idea that the application of steam to this coal, when fully ignited, would produce all the effects of bituminous coal; that it would prove very valuable for the purposes of steam navigation, more especially for long voyages, since it might be regarded as concentrated fuel; and I contrived a grate, which was brought out by Kymer and Leighton's patent. In order that the elements of water may combine with carbon, it is necessary that the carbon be kept in a very active state of combustion, and in the form of anthracite coal—more particularly, I found the use of a blast necessary to effect this. To enable me to use a blast, and, at the same time, to apply the heat of the grate-bar to the generation of steam, so that the steam should pass with the blast through the highly-ignited carbon, I contrived the grate in question. Under these circumstances, both the elements of water, oxygen and hydrogen, combine with the ignited carbon, and produce the two combustible gases—carbonic oxide and carburetted hydrogen. These passing off from the fire, and meeting with sufficient oxygen, or fresh air, to consume them, occasion gaseous or diffused heat in proportion to the rapidity with which the action is carried on; and this may be regulated to the greatest nicety by increasing or diminishing the blast, which is easily effected by means of valves. I had an interview with Dr. Faraday, at the Royal Institution some years since, for the purpose of explaining to him these opinions, in which he fully concurred. He seemed at that time to take a great interest in the subject, and put several questions to me. He asked if I considered that we gained heat by the application of water? I answered, no; but that I considered we altered the effect of the heat; that, instead of all the heat being in the fire itself, we diffused it over a wide space. He was curious about the appearance of the flame we produced; I described it as a thin transparent flame of a greenish-yellow colour, when he remarked—"I have no doubt a much hotter flame than a more luminous flame."

Dr. Frankland, in his report on Watney's anthracite coal, referring to the use of steam in aiding combustion, makes the following remarks:—

It is easy to prove from well known data, that no real gain in the absolute quantity of heat evolved by the combustion of a given weight of coal, is in this manner obtained; but the application of the principle to the combustion of anthracites has obviously very great advantages, inasmuch as the total quantity of heat, which would otherwise be all evolved in the fire-place, is distributed throughout a considerable length of the flue by the ignition of the combustible gases within these flues, and at the same time a much larger quantity of fuel can be burnt in a given time upon a certain area of grate surface, than without the intervention of the steam, which dissolves, as it were, the carbon from the ignited coal, and carries it into the flues to be there burnt. \*

The results of these experiments are highly satisfactory, and fully prove the applicability of the plan to the rapid production of steam by anthracite coals. This increase of evaporation from equal grate surfaces, the conditions of draught, &c., remaining the same, is clearly seen from the following comparison:—

Area of grate open ..... 112 in. ..... 56 in.  
Weight of water evaporated per hour per square foot ..... 169.5 lbs. ..... 123.5 lbs.  
of grate surface without steam ..... 194 lbs. ..... 152.5 lbs.  
Ditto ditto with steam ..... 14.5 ..... 23.5

In addition to this, there are other advantages which result from this application of steam, which must be seen to be properly appreciated: these are, a beautifully clear fire, an intensely hot flame filling the flues without any smoke, and the preservation of the bars by their being kept much cooler, and by the clinker being prevented from adhering to them; in fact, the great facility with which the clinker is removed from the bars without diminishing the force of the fire, is a remarkable feature in this application.

As a practical corroboration of the preceding—

DEAR SIR.—In compliance with your request, as per your note of the 24th inst., I send you annexed, in reference to the use of steam for the purpose of working stationary engines, and the saving effected thereby. At the beginning of the present year we commenced working exclusively with steam, and by the aid of a blast, grooved fire-bars, and a jet of steam underneath, we find the plan answers exceedingly well. You will also be glad to learn that this has been effected without damage to the boilers, which were examined a short time since by Mr. Waddle, and pronounced by him to have sustained no injury whatever. I think it very probable some further reduction may yet be made in the quantity of steam used per month, as the engineers are more reconciled to the change, and do not exhibit so much prejudice against the alteration as was the case at first.—HENRY HILL: *General Cae Gwyrion Colliery*.

1850—Stone coal per month for engine, 84 tons, at 9s. ..... £37 16 0  
1851—Calm ..... 69 ..... at 2s. 6d. ..... 8 12 6

Saved in fuel ..... 15 ..... In cash ..... £29 3 6  
Account of steam weighed to engine, from January 1 to June 12, 1851:—January, 63 tons 7 cwt.; February, 76 tons; March, 76 tons 12 cwt.; April, 67 tons 3 cwt.; May, 78 tons 4 cwt.; June, 53 tons 15 cwt.; 114 tons 1 cwt.; being 560 tons for six months.

In the *Mining Journal* of the 20th Sept., p. 457, there is a statement of the relative work of an ordinary puddling furnace, and one of Plant's patent furnaces: the use of steam is the only part of this patent which is applied. In puddling with Kymer and Leighton's water grate, there is a difficulty arising from the necessity of having the vapour of water always in action. Mr. T. H. Leighton has contrived a new arrangement to remedy this defect, which can be applied to any ordinary fire. All the advantage of Plant's plan will be secured, with the addition of an improved quality of iron occasioned by the vapour of water passing through the fire. Mr. Leighton has adopted the term of "hydro-carbon fire" for this mode of combustion. It is now nearly 14 years since Mr. Leighton suggested to Sir J. J. Guest the use of steam in the puddling furnace. He ultimately adopted the suggestion. The plan adopted at Dowlais did not carry out

Mr. Leighton's intention to the extent he had in contemplation. The above principle was tried by means of Kymer and Leighton's water grate, with bituminous coal for puddling iron. The chief difficulty experienced arose from the rapidity with which the iron had a tendency to pass into the pure metallic state. When a quantity of cinder was used, with great exertion on the part of the workman, a large yield of iron was produced in a short time, which a Mr. Hopkin Davies declared was the best puddled iron he had ever worked into tin-plates. This was at the Cwm Avon Works, in April, 1851. During the above trials, while all the surrounding furnaces showed either a cloud of black smoke or a dense smoky flame at the tops of the chimneys, that of the hydro-carbon fire showed neither. In the daylight nothing was to be seen; in the dark, a stream of clear light. A plan was brought forward a few years since for burning anthracite coal by means of a blast, and passing vapour of water through the fuel with it. The inventor has applied the above term (hydro-carbon) to this mode of combustion, and has modified his original plan, so that the principle may be applied to any boiler or furnace fire while at work, and be made the most certain and complete means of consuming the smoke of any bituminous or free-burning coal.

The *rationale* of the combustion of smoke is simply this. The vapour of water dilutes, as it were, the denser portion of the volatile matter in the coal, which would otherwise pass off as smoke, converting it into mixed gases, which are consumed, the use of the blast maintaining a higher temperature in the fire, while it allows sufficient air to be admitted over it to furnish the requisite supply of oxygen. In addition to the consumption of smoke, it has been proved that the evaporative power of fuel is greatly increased, the fire kept more open, and clinkering prevented, by the application of vapour of water. These views have been long entertained by the inventor, and are fully confirmed by the concurrent testimony of several eminent men of science. Objections may be made to the use of a blast for such purposes, but experience will prove these to be groundless, and remove them. I fear I have already trespassed too much upon your valuable space, but must in conclusion state my conviction that, by a little zealous co-operation, the smoke nuisance of London, and other large towns, may be completely removed. I know Mr. Leighton is at present engaged in maturing a plan for the abatement of smoke from domestic fires,—the particulars of which will, doubtless, appear in an early Journal.—*ANTI-SMOKE: Swansea, Oct. 8.*

#### ALCHYMICAL SCIENCE—No. III.

SIR.—Having in No. II. of this interesting series of metallurgical researches presented to the consideration of your readers a remarkable instance of allodial metamorphoses, investigated by the *more than Ducal Cavendish*, I now exhibit an equally remarkable metallic increase, resulting to a series of operations by *LAMPADIUS*, and repeated with somewhat similar results, as regards the *ARGENTINE increase*, by M. M. Jordan, upon a metalline slag, generically denominated *SPREIS*.

Although in neither case, in the original German, is the nature and course of operation given, but from obscure remarks, having a general intention and bearing, I can discover that the method of treatment has been similar in both cases, and probably mere repetitions of each other, and simulative of my mode of *SECONDARY MINERALISATION*. It may not be out of place here to describe in general terms the object and effect of this so-called Secondary Mineralisation, preceded by a short thesis on the Constitution of Matter, derived from a publication from my pen 17 years ago.

The views I therein take of matter (without reference to the number and identity of distinct material simple), is, that the ultimate atoms of matter are spheroids, and the atoms of that description of matter, which I denominate *CORPUSCULAR ELEMENTS*, are of immensely larger size than the atoms of the *FORMATIVE ELEMENTS*, which are of infinitesimal dimensions in comparison—the one standing in relation to the other as the bricks and mortar of any building.

The so-called simple bodies, carbon, silicon, boron, phosphorous, sulphur, selenium, iron, gold, mercury, &c., belong to the former class, whilst electron, astron, phorin, photon, and thermon, &c., appertain to the latter class. Now I opine, from analogy of the strongest kind, that each corpuscular atom is *beset* by an immense number of *formative atoms*; and when *Astro* predominates, the greatest amount of atomic motion, *inter se in mass*, prevails. When *Electron* most abounds, the body is a solid *excellence*, or a very dense liquid. When *Phoxon* is in excess, the crystalline disposition, with transparency, or phosphorescence, obtains, whilst in those bodies wherein *Thermon* predominates the fluid or gaseous and liquid forms are most prevalent.

So much for the nature of the accident of natural condition of bodies; but as in no body can *Electron* be entirely absent, and in all varieties of matter its quantity varies, whereon essentially depends the natural properties of bodies, so any predisposition which can increase or diminish the *ELECTROSPHERE* of any body, proportionately possesses the power of metamorphosing or transmuting that particular form or condition of the *MUNDANE ELEMENTS*, whatever they may be.

That this transmuting force exists in all natural operations, and is even the ultimate or proximate form of *Nascency*, we shall see by-and-by. Now, my operation of *secondary mineralisation* is of this kind, and the only difficulty under which I labour in this regard is sufficient duration of operation—the transmuting force or action being essentially progressive.

Analysis of *Speiss*, by *Lampadius*:—

Antimony	0.0335
Silver	0.0003
Arsenic	0.0548
Cobalt	0.01672
Copper	0.05682
Iron	0.08032
Nickel	0.0318
Lead	0.0600
Sulphur	0.07818
	= 987.28 grains.

The identically same mass, after a suite of particular operations, whose object was to obtain these constituents in the metallic state, without oxidation and reduction, by which 560 grains of lead were separated in a pure state, gave by analysis:

Antimony	0.0252
Silver	0.00035
Arsenic	0.04840
Cobalt	0.01903
Copper	0.019820
Iron	0.05870
Nickel	0.02952
Lead	0.00008
Sulphur	0.04870
	= 999.28 grains.

Hence, with a complete revolution in the general metallic proportions, we have here another undoubted instance of the actual production of 11 proportions of *SILVER*.—W.M. RADLEY, Ch. E.: *Brixton, Oct. 25.*

#### THE NEWTONIAN PHILOSOPHY OVERTHROWN.

SIR.—It is easy to write of mining, of metallurgy, of colliery ventilation, or of terrestrial magnetism with *éclat*, though a man may know nothing practically of any of these arts or sciences, and a facile easy writer may, without danger, dilate upon the merits of each art, when there are no established rules which can be in every instance applied. He may appear a very Solon to the mass of his readers, overwhelmed as they are by the wordy torrent of opposite phrases which pour upon them from his teaming brain; but when a man takes upon himself to ridicule the system laid down by Sir J. Newton, and attacks a science which alone can lay claim to exactitude and to strict accuracy, he reveals the shallowness of his mind, and places himself in a position painfully ridiculous to those who can appreciate the masterly reasonings and logical deductions of Newton. Let Newton answer Mr. D. Mushet's tirade against him in one of Newton's lemmas.

Let any curved line, *A B*, given in position, be subtended by the chord, *A B*, and at any point, *A*, in its continuous curvature, let it be touched by a line, *A C*; then if the points, *A* and *B*, continually approach, and ultimately coincide, I say that the angle, *B* and *C*, contained between the chord and the tangent, will be diminished without limit, and will ultimately vanish. Let *C B* be the subtense perpendicular to the tangent. Describe a circle touching *A C* in *A*, such that the curvature of this circle should be not less than that of the curve, *A B*; produce *C B* to meet the circle in *D*; draw the diameter, *A E*, and join *A D*, *E D*; then as the point, *C*, moves up to *A*, the subtense, *C B*, also moves towards *A*, and, therefore, the point, *D*, moves towards *A*, and the arc, *A D*, is continually diminished. Hence, by Euclid, the angle, *A E D*, and, consequently, the angle, *D A C*, which is always equal to it, continually diminishes; and when *D* coincides with *A* it vanishes, because the arc, *A D*, then also vanishes;

therefore, much more does the angle, *B A C*, which is contained in the angle, *D A C*, vanish also.

Now, I challenge Mr. D. Mushet to point out the *dilemma* here, and should he fail to do so, I may, I think, with the rest of your mathematical readers, write him down, like Dr. Pangloss, A.S.S. In last week's Journal Mr. Mushet mistakes the versed sine of half the arc for that of the whole arc—a pretty little blunder for a man who would show, if he could, that Newton was a mere visionary speculator, like Aristotle or himself. Machines (says Mr. Mushet) are made by physics, not by algebra. May I ask him what physics are without the help of algebra? Or what laws of force, motion, or time, can be investigated without the aid of algebra, or even the despised differential calculus? Were algebra, geometry, and the differential and integral calculus taught more than they are in our public schools, we should have more sense and fewer words in the original correspondence which appears in your columns upon very many subjects. It is, at all events, clear that Mr. D. Mushet has never read, or at least has never understood, Newton's demonstrations of the laws of force which governs the planets in their orbits. Until he has mastered this subject, let him abstain from placing himself as the antagonist of Newton, lest the public should compare their respective powers, and exclaim—How weak and insignificant are those of the former; how powerful and amazing are those of the latter.—W. C. O.: Oct. 20.

#### M. SISCO'S NEW CHAIN.

SIR.—In your Journal of the 11th inst. you notice, and speak highly, of a chain which has been submitted to the Lords

## MINING IN SOUTH AUSTRALIA.

[FROM OUR OWN CORRESPONDENT.]

*Adelaide, May 15.—I avail myself of an overland mail to forward to you the report of the Burra Burra Company, which will be read with interest by your subscribers. You will perceive that the prospects are as good as ever: what will your readers say of the size of the lode mentioned in Capt. Reach's report? The large engine has not yet arrived, but the preparations are all ready for transporting it forthwith to the Burra; an immense carriage has been purposefully constructed to carry the heavy pieces, but with every precaution, and the appliances of unlimited means, it will be a matter of considerable difficulty to get this large engine safely delivered at the Burra, considering the unformed state of the roads—although you are aware that the road all the way to the Burra is level enough, and does not offer any other obstruction to the transport.*

*A sudden fall of 30/- per share took place a short time since in Burra shares; they were at 20/- one week, and went down to 17/- in a couple of days—present price 17/1. This fall was owing to nothing else but a lot of shares having been forced into the market by a speculator who could not hold, and is in no wise to be looked upon as any criterion of the value of the shares generally: were a demand to take place to-morrow they would immediately rise again, as they are still considered worth 20/0, in the face of the next dividend being reduced in amount, which seems pretty generally the impression will be the case.*

*During the last week or two we have at length been blessed by a heavy fall of rain. The winter season of 1850 (May to October) was so dry, that not alone was the supply of grass much less than usual, but the waterholes on the lines of the heavy traffic dried up. As the summer advanced, and the scanty pasture and supply of water diminished, the transport became more precarious and uncertain every day, till at length, in last month, the carcasses of dead bullocks all along the line of roads to the north, plainly told that until the rains came, no drays could venture to travel.*

*The Patent Copper Company, at Kooringa, were forced to extinguish one furnace after another, till, at this present time of writing, the fires are for the moment all out; but they could neither get their supply of wood from the scrub, to the eastward, nor the supply of coal from Port Wakefield, to the westward. The Burra Company cannot get either the copper or the ore which they have on hand at the mine down to the coast, and the directors, therefore, intimate, in their last report, the probability that exists of a reduced dividend next quarter: but, fortunately, the drought is now at an end—the fall of rain has been very heavy, and coming as it does at this early period of the autumn, the warm sunshiny days which have intervened between the rainy days have produced such a change in the aspect of the country as can only be witnessed in an Australian climate. The parched dried up appearance of the country has given way to an emerald green colour, and in two or three weeks more there will be abundance of grass, and things will go on as usual.*

*If one considers for a moment how peculiarly liable traffic in South Australia is to become interrupted—on the one hand by excessive dryness, and on the other by the flooded state of the country, when it once begins to rain in earnest, too much stress cannot possibly be laid on the importance of establishing tram and railroads as soon as possible. No other country in the world is so favourably formed for such undertakings as this; and any doubt that may exist as to such speculations being remunerative can easily be removed, by granting the companies who would undertake to construct rail and tramroads a certain proportion of land along their lines: this could be carried out now, as much of the land is still unsold, with the certainty of being able to bring produce to the shipping port at a trifling cost and great expedition—the land along both sides of the lines would be one vast cornfield. A railroad from Adelaide to the Burra would open up, not alone a large extent of excellent agricultural land, but also the principal mining districts; and we would then be in a position not to fear either draught or flood.*

*It is to be hoped that the new Representative Council will take the initiative in these matters, and pass a measure on a sufficiently liberal scale to encourage English capitalists to provide for our necessities in this respect. You may depend upon it, the force of my observations will be substantially borne out by the despatches which must be on their way to England now from the Patent Copper Company. The large capital which this company has already invested here will not have fair play, unless some means are adopted to ensure them a constant supply of fuel. Taking the distance from Port Wakefield to their works at Kooringa to be 60 miles, of a country well adapted for tramroads, it certainly does not appear probable that this wealthy company, after investing 150,000/- and more, will hesitate to invest another 50,000/- or 60,000/-, in order to place their first investment on a safe footing. The Patent Copper Company will, of course, advocate the line to Port Wakefield, west of the Burra; but there can be no doubt that, to the colony at large, a proper and well constructed line of railroad from Port Adelaide, through the centre of the colony to the Burra, will be of greater benefit than a mere tramroad to Port Wakefield. A couple of years more will witness a complete line of steam communication with England; many people will then make the voyage who now do not give it a thought—men of influence and intelligence will be able to visit Australia with ease, and judge for themselves; and I do not apprehend I am too sanguine in saying that the next 10 years will see that important work, the Burra railroad, carried into effect.*

*The George Home, a barque of about 350 or 400 tons, founded a fortnight ago, with 500 tons of Burra ore on board, shipped at Port Wakefield by the Patent Copper Company: she brought a cargo of coals from Newcastle (New South Wales) for the smelting works, which was discharged at Port Wakefield, and I believe a survey was held on her prior to taking in the ore. She sailed a fortnight ago, and had not got more than 300 miles from Kangaroo Island before she literally went to pieces—all her timbers starting, and, as the mate described it, "being only held together by the sheathing." The crew and one or two passengers who were on board were all saved in the boats, although they suffered considerable hardship before they reached Adelaide. She was an old gunbrig, built in 1804; and the only wonder is, how any captain could be found rash enough to take the command of such an old tub.*

*There has been a new discovery of mineral land—boulder of copper ore, 20 feet long, 10 feet broad, and from 6 to 8 feet out of the ground, about 60 miles north-east from Adelaide, close to the Murray Scrub; it is to be surveyed shortly, when I, of course, with many others, will visit the place and judge for myself, and will then inform you what it is likely to turn out. Report speaks highly of it; in fact, the boulder which was the origin of the Burra Mine was not larger than this. You can fancy there are plenty of us anxious for a slice of it.*

[To be concluded in next week's Journal.]

## GREAT WESTERN AND FOREST OF DEAN COAL COMPANY.

Capital £25,000, in 25,000 shares of £1 per share—paid-up.

PROVISIONALLY REGISTERED.

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Prospects may be obtained of, and application for the remaining shares to be addressed to, the Secretary, at the offices of the Company; or to the Solicitors to the Company, Messrs. Coombe and Nicoll; Messrs. Lind and Rickard, stockbrokers, No. 3, Bank Chambers, Lombury; and of the following agents:—Henry Darvill, Esq., solicitor, Windsor; Messrs. Lowe and Sons, stockbrokers, Liverpool; Geo. P. Wilkes, Esq., solicitor, Gloucester; Henry Dayrell, Esq., stock and sharebroker, 6, Clare-street, Bristol; J. B. Wicks, Esq., Barbican, Plymouth.

By order of the Directors,

HENRY CAPPER, Secretary.

## EAST LANCASHIRE RAILWAY.—The Directors are prepared to RECEIVE TENDERS for FOUR HUNDRED AND FORTY TONS OF IRON RAILS, and FIVE HUNDRED TONS OF BAHLOW'S CAST-IRON SLEEPERS, together with the necessary fastenings.

Specifications and drawings may be seen at the Engineer's Office, Bury Station.

Tenders to be sent in to the Secretary before Friday, the 31st inst.

By order, JAMES SMITHELLS, Sec.

## TOURNAY TO JURBISSE, AND LANDEN TO HASSELL RAILWAY COMPANY.—The Board of Management hereby inform the shareholders in the above Company, that at the Fifth Half-yearly General Meeting, held at the offices of the Company, at Brussels, on Monday, the 13th inst., the balance-sheet, as presented by the Board, was duly adopted, and the DIVIDEND, for the first six months of the year 1851, fixed at FIVE SHILLINGS and TWO PENCE per share. The same will be PAYABLE on and after the 1st of November next, on presentation of the shares, at the offices of the Company, 67 A, Upper Thames-street, London, and 4, Rue des Béguines, Brussels, between the hours of Ten and Twelve A.M.

By order, GEORGE WOODS, Secretary.

RAILWAYS.—With an abundant harvest, cotton, and colonial produce at one-half the price of last year, and railway calls, comparatively speaking, all paid up, it follows that the already large surplus capital now waiting employment must necessarily increase. The exchanges are everywhere becoming more favourable for the country. The California and Australian gold discoveries will also add to the abundance of money. Hence the causes of an approaching improvement in the value of public securities. Capitalists who seek profitable investments, untroubled with risk, should act only upon the soundest information. Price seldom indicates the true value of railway property. Hence many shares are frequently as much above as others are below their real value—the market price of the day being ruled more by the present supply and demand, and the operations of speculators, than by any reference to the intrinsic merits of the property. The bond &c ultimate value of a railway depends upon its costs, traffic, and expenditure; the probabilities of competition or alliance with neighbouring companies, the requirements for additional capital, and other causes wholly irrespective of the merely speculative feeling of the day. Calculations founded upon these considerations, show what shares at the current market price may be bought, sold, or exchanged with advantage. But the selection of that stock which is the most eligible requires data which can only be arrived at by those who give an undivided attention to the subject.

Every information afforded to capitalists wishing to invest or to exchange their securities, or sales or purchases effected upon the best terms. The Subscribers, believing exclusively to a legitimate commission business, JAMES S. TRIPP & CO.

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## CHYRASE CONSOLS TIN AND COPPER MINE, ST. ENODER, CORNWALL.

In 1824 shares, of £5 5s. per share.—Deposit £1 1s. 6d.

Applications for the remaining shares to be made to Mr. Thomas Lewis, No. 17, New Meeting-street, Birmingham, Purser to the Company, of whom every information can be obtained.

## CWMDFYLE ROCK AND GREEN LAKE COPPER MINING COMPANY.

CONDUCTED ON THE COST-BOOK PRINCIPLE.

SHAREHOLDERS NOT LIABLE BEYOND THE AMOUNT OF THEIR SHARES.

Capital £30,000, in 10,000 shares, of £3 each.

6000 paid-up shares carrying interest of 6 per cent. upon £2 per share, the remaining

£1 to take the dividends from the working of the mine.

4000 deposit of £1 paid, and no further call likely to be made.

The above shares have all been subscribed for, and the mine will be in full activity, by being worked upon an extensive scale, so soon as the smelting and refining houses are erected, which will be commenced immediately.

The Committee of Management have been engaged in testing the value of the minerals produced from the mine, and have the satisfaction in being able to state, that the result has been perfectly satisfactory, as they find that the minerals not only produce from 15 to 30 per cent. from their inferior samples, and from those of a superior quality 30 to 60, of not only fine copper, but a small per centage of gold and silver.

Offices, 2, Scott's-yard, Bush-lane, Cannon-street, City.

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CONDUCTED ON THE COST-BOOK PRINCIPLE.

In 8400 shares, of £1 5s. per share.

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NOW BEING WORKED ON THE COST-BOOK SYSTEM.

In 6000 shares.

A moiety will be carried on by the present proprietors.—A call has been made on the whole of the shares, the amount of which will cover the entire cost of engine, machinery, and all erections necessary for fully working the mine: 3000 shares only will, therefore, be disposed of to unexceptionable parties at £1 per share, inclusive of the call.

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THOMAS HARVEY, Esq., Great St. Helen's

BANKERS—Messrs. Barnett, Hoares, and Co.

MANAGING AGENT—Capt. Joseph Vivian, North Rosear.

OFFICES, —29, GREAT ST. HELEN'S, LONDON.

The importance of this mineral property is so obvious, that little need be said of it beyond the statements contained in the annexed reports.

The set is very extensive, being upwards of 600 fathoms in breadth, and the same in length. The lodes of copper and tin are six or eight in number at least, only one of which has been worked on, and are the lodes of the celebrated West Wheal Butler, South Wheal Bassett, South Wheal Frances, and some of those of North Wheal Bassett—West Wheal Grenville being immediately west of this remarkable cluster of the richest mines in the world.

The geological position of the mine is most favourable, at the junction of the granite with the killas. The ores raised from this mine are the black and grey copper, and are the richest kinds of ores found in the county; and the tin is the best grain tin—specimens of each may be seen at the offices.

The shafts are in good condition—one of them requires to be sunk 4 fathoms only, to allow the run of ore in the 42 fathom level to be raised and returned.

The surface buildings, acco.-nt-house, smiths' shop, &amp;c., are in good repair.

A new 40-inch cylinder steam-engine is now being erected, and all necessary machinery for working the water, which will be accomplished within two months—soon after which returns from the ores may be relied on.

The following reports from the agents of the several important mines under their management, in the immediate neighbourhood, afford the surest guarantees of the value and importance of this mine; and no reasonable doubt can be entertained of results as successful as those which have uniformly attended the working these lodes in the mines already mentioned.

The plan of the mine and section of the workings (which may be seen at the office) will furnish a correct idea of its extent, situation, and capabilities.

Applications for shares and prospectuses may be made to Foster Brothers, the Stock Exchange, and 27, Tokenhouse-yard, at whose offices specimens of the ores may be seen. London, October 24, 1851.

## REPORTS.

Camborne, Jan. 1.—In reply to your communication relative to West Wheal Grenville, situated in Crowan, and adjoining the parish of Camborne, I was employed there as underground agent, and remained in that capacity until the mine ceased working. The reason of her being suspended I never knew; and when I had an order to commence drawing up the materials, I requested the sumpman, who were then engaged in sinking the engine-shaft below the 42 fathom level, to stop some of the ore ground in the bottom of the 42 fathom level; and in three cores, with long picks which I had prepared for that purpose, they broke about £50 worth of ore. I strongly urged the representative of the company (who acted for me, I believe, distant shareholders) to complete the shaft to the 42 fathom level, as I was of opinion that the next level would be a good one, but my entreaties were of no avail. The fact of the ore ground having lengthened from the 22 to the 42 fathom level, from 4 feet to 7 fathoms, and, at the same time dipping towards the killas, ought to be of itself a sufficient inducement to have had another level under the ore ground, and having only 4 fathoms to sink us to do so. The lode in the 42 fathom level is about 1½ ft. wide, composed principally of grey and black ore, a portion of muriate, and will turn out 2 tons per fathom, worth about £5 per ton—the underlay of the lode is about 4 inches in a fathom. I have no hesitation in stating that I know of no spot in our neighbourhood which is likely to give an earlier chance of success to the adventurers than this speculation; and have oftentimes stated it to be my opinion that in the killas a good lode would be found. Since the last working the lode has been opened upon the back in the killas, some few fathoms to the east of the shaft, in which can be seen a fine strong lode, about 3 feet wide; this goes further to confirm my opinion as to the probability of success. I have had some 60 years' experience in mining as an underground agent; and I repeat, that it is my impression, judging from the locality, its position, and what has already been discovered, that she will make a good mine. The expense of working will be trifling in comparison with many mines in this neighbourhood, that it makes it the more desirable; a 30-inch engine, with a 6-inch fly, will put her down 100 fms., and enable you to intersect the lodes to the north and south, which amount to some five or six in number, independent of the main lode. Should you require any further information, I shall be glad to communicate with you.

JOSEPH VIVIAN.

North Rosear, Feb. 19.—For the guidance of any parties by whom Capt. Johnson Vivian may not be known, I beg to state, in my opinion, any report of his relating to mining matters may be strictly relied upon; and that, judging of the locality of West Wheal Grenville, I consider it to be a good speculation.

JOSEPH VIVIAN.

Carn Brea Mines, near Redruth, Feb. 20.—Having this day been on the ground it further strengthens our opinion that your set, formerly called the Gernick Mines, now West Wheal Grenville, situated in Crowan, and adjoining the parish of Camborne, is a well-settled out the most promising appearance, being a continuation of the lodes worked on in the best dividend-paying mines in this county—South Bassett, South Frances, &amp;c., with those to the west of the above-mentioned, yet in their infancy, but, so far as developed, are equally promising, lying and situated on the junction of killas and granite, with two or more strong courses of elvan running through the entire length of the set, having so much already done with regard to surface erections, having an account house, smiths' shop, and other necessary erections, two engine-shafts, well secured with stone, two bob pits, and stands complete. The capital required being so comparatively small, to put the mine in a full and efficient state of working, we can with confidence recommend it to any party, as holding out prospects of no ordinary nature, believing, if worked with spirit and economy, that she will shortly be on the list of the best paying mines in the county.

JAMES MINERS, JOHN VIVIAN: Agents at the Carn Brea Mines.

Agents at South Wheal Frances, and South Wheal Bassett.

Levenses, March 17.—Agreeably to your request I have inspected the Gernick set, now called West Wheal Grenville, the situation of which is at the junction of the granite with the sandstone. A large elvan-course passes through the set, with several fathoms of the 42 fathom level in depth, and the shaft sunk about 4 or 5 fathoms below that level. I have been informed by accredited miners that there is a good lode of ore in the bottom of this level, 8 or 10 fms. long. Several tons of rich ore have been raised since the order a few days ago to discontinue the workings of the mine. This mine is situated in the same position with the junction of killas and granite as those of those of the richest mines in Camborne. This mine, if worked with spirit and under good management, in my opinion, will be found a good and permanent speculation.—MARK REED, agent of Levenses.

Agents at Upper Thames-street, London, October 16, 1851.

GEORGE WOODS, Secretary.

RAILWAYS.—With an abundant harvest, cotton, and colonial produce at one-half the price of last year, and railway calls, comparatively speaking, all paid up, it follows that the already large surplus capital now waiting employment must necessarily increase. The exchanges are everywhere becoming more favourable for the country. The California and Australian gold discoveries will also add to the abundance of money. Hence the causes of an approaching improvement in the value of public securities. Capitalists who seek profitable investments, untroubled with risk, should act only upon the soundest information. Price seldom indicates the true value of railway property. Hence many shares are frequently as much above as others are below their real value—the market price of the day being ruled more by the present supply and demand, and the operations of speculators, than by any reference to the intrinsic merits of the property. The bond &amp;c ultimate value of a railway depends upon its costs, traffic, and expenditure; the probabilities of competition or alliance with neighbouring companies, the requirements for additional capital, and other causes wholly irrespective of the merely speculative feeling of the day. Calculations founded upon these considerations, show what shares at the

## THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Dividends per Share Declared.	Last Paid.	Last Price.	Present Price.	Paid.	Last Price.	Present Price.	
5120	Alfred Consols (copper), Phillack	3	£ 1 19 to 1st Oct.	20 6 0 Oct.	13	134 132 14	1024	South Plain Wood (copper), Ashburton	5	6
1248	Allt-y-Crib (silver-lead), Talybont, Wales	—	9 7 6 to Oct.	9 5 0	7 74	74	3000	South Speed (copper and tin), Uny Lelant	15	20
1624	Baileswidden (tin), St. Just	112	8 15 to Aug.	0 4 to Aug.	10	—	192	South Tamar (silver-lead), Bear Ferris	14	4
4000	Bedford United (copper), Tavistock Devon	24	3 16 to Aug.	0 4 to Aug.	78	78 78	2000	South Wales Mining Company (lead)	14	2
64	Boscombe Down (tin), St. Just	—	750 0 to May, 1849	—	100	—	256	South Wheal Josiah (copper), Calstock	2	1 1
100	Botallack (tin and copper), St. Just	1824	440 0 to 5th April	5 0 to May	200	200	1024	St. Aibyn and Grylls (copper and tin)	3	34
1000	Bryntail, Llanidloes, Montgomeryshire	31	0 5 to end June	0 5 to June	151	14	128	St. Edoder (copper and lead) St. Edoder	1	1 1
1000	Callington (lead and copper), Callington, Devon	29	6 0 to Sept., 1847	—	64	5	999	St. Minver Consols (silver-lead)	1	3
4026	Calstock United (copper)	24	0 5 to Oct., 1861	0 5 to Oct.	51	—	687	Tavy Consols (copper), near Tavistock	5	6
1000	Carn Brea (copper and tin), Illogan	15	206 0 to Sept., 1851	2 0 to Sept.	95	—	5000	Tempo Consols (tin & copper) Cornwall	2	5
128	Comford (copper), Gwennap, Cornwall	70	—	—	204	128	Tockenby (copper), St. Ives	104	10	
256	Condurrow (copper and tin), Camborne, Cornwall	20	11 0	—	103	128	Tolcarne (tin and copper), Camborne	24	1 1	
128	Cwnywith (lead), Cardiganshire	60	—	—	110	—	1024	Trannack and Bosence, St. Erth	15	5
1024	Davon Great Consols (copper), Tavistock	1	234 10 to Sept.	5 0 to Sept.	280	280 282 75	1024	Trannack United Mines (tin and copper)	14	2 2
180	Dolcoath (copper and tin), Camborne	252	855 14 to 1847	—	28	—	2048	Trebarvah, Perranuthnoe	1	3
128	East Foot (tin and copper), Pool, Illogan, Cornwall	248	238 0 to 1843	—	185	135	2048	Trebell Consols (tin and copper), Lanivet	12	2 2
94	East Wheal Crofty (copper), Illogan, Cornwall	125	242 19	—	150	—	600	Tregardock (lead), St. Teath	14	5
128	East Wheal Rose (silver-lead), Newlyn	80	227 10 to 5th Sept.	12 10 to Sept.	450	—	224	Tregardon (silver-lead) Wadebridge	15	10
494	Fowey Consols (copper), Twardreath	40	—	—	39	—	1060	Treloweth (copper), St. Erth	5	5
8750	General Mining Company for Ireland (copper)	18	35 per cent. to June	10 per cent. & year	54	—	600	Treloweth (copper), St. Erth	5	5
100	Goginan (lead), Cardiganshire, Wales	5	440 6 8 "	—	200	150	1024	Tremelaw (lime quarries)	212	1 1
96	Great Consols (copper), Gwennap, Cornwall	1000	353 6 8 to January	—	200	—	512	Trethiery (lead), St. Cleer	112	1 1
119	Great Work (tin), Germoe	100	0 2 to Sept.	0 2 to Sept.	3	—	2048	Trevyan	24	2 3
1024	Herdfoot (lead), near Liskeard, Cornwall	8	115 0 to Aug.	5 0 to Aug.	200	—	604	Trowan Consols (tin), Towedeck	7	9
1000	Holmibush (lead and copper), Callington	24	0 7 to Aug.	0 2 to Aug.	41	—	100	Trumpet Consols (tin), near Helston	95	100
786	Kirkcudbrightshire (lead), Kirkcudbright	92	25 0 to Feb., 1844	Feb., 1844	12	124	4000	Tyn-y-Worgold (slate), near Carnarvon	4	4
1000	Lewis (tin and copper), St. Erth	17	0 5 to Sept.	0 5 in Sept.	41	—	500	Tywardhayle (copper), Illogan & St. Agnes	60	22
162	Levant (copper and tin), St. Just	24	3 0 to 1st Aug.	0 10 to Aug.	18	18	512	Tywardreath (copper), St. Blazey	4	124
100	Lisburne (lead), Cardiganshire, Wales	75	1032 0 to 5th Sept.	2 0 to Sept.	150	—	1024	United Mines (copper and tin), Tavistock	12	10
8000	Low's Patent Copper Smelting Company	9	640 0 to 1st Aug.	20 0 to Aug. 1	700	—	5000	Warleggan Consols (copper)	1	6
9000	Mining Company of Ireland (copper, lead, and coal)	7	1 10 6 to Feb., 1847	1 0 to July 1	10	—	1024	West Alfred Consols	91	9
2000	North Pool (copper and tin), Pool	224	217 10 to 1st Sept.	7 10 to Sept.	203 210	200	6000	West Basset (copper), Illogan	24	8
140	North Roskear (copper), Camborne	10	226 0 to ditto	6 0 to Sept.	180	200 192	1024	West Beam (tin), St. Austell	24	2 2
6000	North Wheal Basset (copper and tin)	—	1 1 to 5th April	—	124	—	256	West Damsel (copper), Gwennap	51	50
128	Par Consols (copper), St. Blazey	552	374 0 to 15 June	0 10 to 4th June	49	—	1024	West Ding-Dong (tin)	1	2 2
1600	Perran St. George (copper and tin)	214	10 0 to March 5	5 0 to March	240	—	1024	West Downa (copper and tin), St. Blazey	40	60
2000	Phosna (copper and tin), Linkinhorne	30	18 4 to 6 Aug.	0 15 to Aug.	25	—	1024	West Fowey Con. (tin & cop.), St. Blazey	40	60
560	Providence Mines (tin) Uny Lelant	202	255 0 to 7 Aug.	2 10 to July 5	125	125 120	2048	West Goginan (silver-lead), Cardiganshire	16	3
256	South Caradon (copper), St. Cleer	24	27 0 to 5th Aug.	3 0 to Aug.	150	145 150	1024	West Nantymwyn	1	1
256	South Tolgus (copper), Redruth, Cornwall	16	101 15 to Sept.	6 0 to Sept.	200	—	1024	West Par Consols (copper), St. Blazey	10	10
248	South Wheal Frances (copper), Illogan	80	8 10 0 to Sept.	0 2 6 to Sept.	10 10	—	1024	West Pentire (copper), Padstow	6	6
1024	Spearne Consols (tin), St. Just, Cornwall	14	899 0 to Aug.	4 0 to Aug.	100	—	1024	West Phoenix, Linkinhorne	6	6
94	St. Ives Consols (tin), St. Ives	80	11 10	—	12	10 12	200	West Polgoon (tin), St. Ewe & St. Mewan	1	8 6d
1000	Stray Park and Camborne Vein (copper), Cornwall	15	2 11 to July, 1849	5 0 to Sept.	34	—	256	West Sharp Tor (copper) Linkinhorne	22	49
6000	Tamar Consols (silver-lead), Bealston	4	5 17 6 to Sept.	0 15 to Aug.	7	6 6	940	West Tolgus (copper), Illogan	14	44
5000	Tincroft (copper and tin), near Pool	7	27 15 to Sept.	1 0 to Sept.	151	—	120	West Trebetherick (copper), Gwennap	15	10
256	Trehane (silver-lead), Menheniot	14	1 3 to Oct., 1847	0 5 Oct. 1847	31 31	31	5000	West Wheal Alfred (copper) Hayle	1	14
8000	Treleigh Consols (copper), Redruth	6	1680 15 to 1848	—	200	—	512	West Wheal Frances (copper), Illogan	9	12
96	Treasvean (copper), Gwennap, Cornwall	20	402 10 to 5th April	6 10 to Oct.	210	210	4090	West Wheal Friendship (copper)	1	12
120	Trethellan (copper), Gwennap, Cornwall	5	246 5 to Oct.	2 10 to Oct.	210	210	3715	West Wheal Jewel (tin and copper)	12	12
200	Trevilley and Barrer (copper)	130	245 0 to 3d Aug.	0 5 to March	34	—	3715	Ditto preference	8	8
1024	Wellington (copper & tin), Perranuthnoe	64	100 2 to Sept.	3 10 to Sept.	1024	West Wheal Rose	2	2 2		
250	West Caradon (copper), Liskeard, Cornwall	20	163 15 to Sept.	10 0 to Oct.	1024	West Wheal Russell, Tavistock	—	—		
512	West Providence (tin), St. Erth	10	245 0 to 3d Aug.	10 0 to 3d Aug.	355	—	1024	West Wheal Shuba	102	1 1
256	Wheat Basset (copper), Illogan	104	109 0 to 1st Oct.	12 10 to Oct.	550	97 100	500	West Wheal Town (copper), Illogan	21	11 1
256	Wheat Brewer (copper), Gwennap, Cornwall	2	—	—	7	—	1024	West Wheal Virgin (tin), Sancredd	2	14
256	Wheat Buller (copper), Redruth	5	—	3 0 to Aug.	57	57 56	1024	West Weston (lead), Chelbury, Shropshire	14	10
124	Wh. Castle and Boswedden (tin & copper)	5	—	—	280	—	1070	Wheat Adams (lead), Christow, Exeter	134	16
126	Wheat Friendship (copper) Devon	120	27 10 to August	2 10 to Aug.	80	85 82	1000	Wheat Agar (copper), Illogan	6	5
5000	Wheat Golden Consols (silver-lead), Perranzabuloe	3	194 10 to 5th Aug.	4 0 to Aug.	200	200	300	Wheat Arthur (lead), near East Wh. Ross	17	49
430	Wheat Lovel (tin), Helston	—	26 10 to May	2 0 to May	40	40 39	1228	Wheat Arthur (silver-lead & cop.), Calstock	13	31
112	Wheat Margaret (tin), Uny Lelant	79	26 10	6 0 to Aug.	20	21 20	3072	Wheat Augusta (tin), St. Just	1	2
512	Wheat Mary Ann (lead), Menheniot	54	21 5 to 21st Aug.	3 0 to Aug.	57	57 56	240	Wheat Bal (tin), St. Just	51	10
40	Wheat Owles, St. Just, Cornwall	200	—	—	280	—	2500	Wheat Caradon (copper), St. Cleer	2	2
240	Wheat Reeth (tin), Uny Lelant	204	27 10 to August	2 10 to Aug.	80	85 82	256	Wheat Carpenter (tin), Gwinnar	14	21
198	Wheat Seton (tin and copper), Camborne, Cornwall	107	194 10 to 5th Aug.	4 0 to Aug.	200	200	4000	Wheat Edward (copper), Calstock	3	51
520	Wheat Trellawny (silver-lead), Liskeard, Cornwall	31	26 10	2 0 to May	40	40 39	1024			